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OM protein - protein search, using sw model

Run on: March 23, 2004, 17:04:13 ; Search time 41.5565 Seconds
(without alignments)
353.554 Million cell updates/sec

Title: US-09-941-314-14

Perfect score: 288
Sequence: 1 KESDDKXHYRFRVLRVAVQRO.....MOWTCKQKPTTNCVPOERE 52

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1586107 seqs, 282547505 residues
Total number of hits satisfying chosen parameters: 1586107

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_29Jan04:*
1: geneseqp1980s:*
2: geneseqp1990s:*
3: geneseqp2000s:*
4: geneseqp2001s:*
5: geneseqp2002s:*
6: geneseqp2003as:*
7: geneseqp2003bs:*
8: geneseqp2004s:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	288	100.0	52	AAU79864	AAU79864 Human cys
2	288	100.0	80	AAU79865	AAU79865 Human cys
3	288	100.0	115	AAU79853	AAU79853 Human cys
4	288	100.0	117	AAU79854	AAU79854 Human cys
5	288	100.0	137	AAU79852	AAU79852 Human cys
6	248	86.1	46	AAU79860	AAU79860 Human cys
7	248	86.1	49	AAU79863	AAU79863 Human cys
8	194	67.4	59	AAU79866	AAU79866 Human cys
9	189	65.6	33	AAU79862	AAU79862 Human cys
10	138	47.9	24	AAU79861	AAU79861 Human cys
11	133	46.2	48	AAU79867	AAU79867 Human cys
12	131	45.5	142	AAE02404	AAE02404 Murine cy
13	131	45.5	142	AAE04433	AAE04433 Mouse cys
14	131	45.5	143	ADA14374	ADA14374 Mouse spe
15	124	43.1	142	ADD46708	ADD46708 Rat Prote
16	124	43.1	142	ADD46704	ADD46704 Rat Prote
17	119	41.3	27	AAU79859	AAU79859 Human cys
18	119	41.3	35	AAU79858	AAU79858 Human cys
19	117	40.6	92	AAW78259	AAW78259 Fragment
20	117	40.6	123	AAW78260	AAW78260 Fragment
21	117	40.6	142	AAW78258	AAW78258 Fragment
22	117	40.6	142	AAE02405	AAE02405 Human cys
23	117	40.6	142	AAE04434	AAE04434 Human cys
24	117	40.6	142	ADA57231	ADA57231 Human sec
25	117	40.6	142	ADA41112	ADA41112 Human sec

26	117	40.6	142	7	ADC74335	ADC74335 Human sec
27	117	40.6	142	7	ADD37980	ADD37980 Human sec
28	117	40.6	142	7	ADD46706	ADD46706 Human Pro
29	117	40.6	142	7	ADD46710	ADD46710 Human Pro
30	114	39.6	141	3	AAV96576	AAV96576 Murine cy
31	114	39.6	141	3	AAE02403	AAE02403 Murine cy
32	114	39.6	141	4	AAE04432	AAE04432 Mouse tes
33	112	38.9	113	6	ADA57563	ADA57563 Human sec
34	112	38.9	113	6	ADA1457	ADA1457 Human sec
35	112	38.9	113	7	ADC74577	ADC74577 Human sec
36	112	38.9	113	7	ADD38088	ADD38088 Human sec
37	112	38.9	114	2	AAW78153	AAW78153 Human sec
38	106	36.8	127	7	ADBE1282	ADBE1282 Rat Prote
39	106	36.8	127	7	ADBE1286	ADBE1286 Rat Prote
40	106	36.8	142	5	ABG60085	ABG60085 Human DIT
41	104	36.1	50	4	AAW15096	AAW15096 Peptide #
42	104	36.1	50	4	ABB34086	ABB34086 Peptide #
43	104	36.1	50	4	AAW27545	AAW27545 Peptide #
44	104	36.1	50	4	ABB32389	ABB32389 Peptide #
45	104	36.1	50	4	ABB28913	ABB28913 Peptide #

ALIGNMENTS

RESULT 1
AAU79864 standard; peptide; 52 AA.
AAU79864;
15-JUL-2002 (first entry)
Human cystatin-8 (Zcys8) antigenic fragment #12.
Cystatin-8; Zcys8; Cancer; procoagulant protein; thrombosis;
spermatogenesis; seminal fluid viscosity; cryopreserved sperm;
sperm motility; fertilisation; antigenic peptide.
Homo sapiens.
WO200220567-A2.
14-MAR-2002.
29-AUG-2001; 2001MO-US026668.
01-SEP-2000; 2000US-0230230P.
(ZYMO) ZYMOGENETICS INC.
Holloway JL, Gao Z, Bishop PD;
WPI; 2002-383044/41.
Novel isolated mammalian cystatin-8 polypeptide useful for promoting
spermatogenesis, and inhibiting cancer procoagulant protein which leads
to inhibition of thrombotic events associated with cancer.
Claim 2; Page 98; 100pp; English.
The invention describes an isolated mammalian cystatin-8 (Zcys8)
polypeptide (I). (I) is useful for: inhibiting cancer procoagulant
protein in an individual and thus inhibiting the thrombotic events
associated with cancer; promoting spermatogenesis, modulating seminal
fluid viscosity, enhancing viability of cryopreserved sperm, sperm
motility and fertilisation; and as antigenic peptides to generate
antibodies. Zcys8 is useful as research reagent for characterising sites
of interaction between Zcys8 and its receptor. Zcys8 is useful in
enhancing fertilisation during assisted reproduction in humans and in
animals. Anti-(I) antibodies are useful to screen biological samples like
blood, urine, saliva, tissue biopsy and autopsy material in vitro for the
presence of Zcys8. The antibodies are also useful to isolate large

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CC quantifies of Zcys8 protein and DNA sequences that encode Zcys8 genes.
 CC The polynucleotide encoding (1) is useful to detect and to localise the
 CC expression of a Zcys8 gene in a biological sample and Zcys8
 CC oligonucleotide probes are useful for in vivo diagnosis. The
 CC polynucleotide encoding (1) is useful in determining whether a subject's
 CC chromosomes contain a mutation in the Zcys8 gene like aneuploidy, gene
 CC copy number changes, insertions, deletions, restriction site changes and
 CC rearrangements and genetic alterations that inactivate the Zcys8 gene.
 CC This sequence represents an antigenic peptide of human cystatin-8 (Zcys8)
 CC
 XX
 SQ Sequence 52 AA;

Query Match 100.0%; Score 288; DB 5; Length 52;
 Best Local Similarity 100.0%; Pred. No. 4.1e-30;
 Matches 52; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 KESDDKXHFRIFFVLKQROVDHLEYNLVEMQWTTCKPRTTNCVPERE 52
 Db 1 KESDDKXHFRIFFVLKQROVDHLEYNLVEMQWTTCKPRTTNCVPERE 52

RESULT 2

AAU79865
 ID AAU79865 standard; peptide; 80 AA.
 AC AAU79865;
 XX
 XX

DT 15-JUL-2002 (first entry)
 XX

DE Human cystatin-8 (Zcys8) antigenic fragment #13.
 XX

KM Cystatin-8; Zcys8; cancer; procoagulant protein; thrombosis;
 KM spermatogenesis; seminal fluid viscosity; cryopreserved sperm;
 KM sperm motility; fertilisation; antigenic peptide.
 XX

OS Homo sapiens.
 XX

PN WO200220567-A2.
 XX

PD 14-MAR-2002.
 XX

PF 29-AUG-2001; 2001WO-US026868.
 XX

PR 01-SEP-2000; 2000US-0230230P.
 XX

PA (ZYMO) ZYMOGENETICS INC.
 XX

PI Holloway JL, Gao Z, Bishop PD;
 XX

DR WPI; 2002-383044/41.
 XX

PT Novel isolated mammalian cystatin-8 polypeptide useful for promoting
 PT spermatogenesis, and inhibiting cancer procoagulant protein which leads
 PT to inhibition of thrombotic events associated with cancer.
 XX

PS Claim 2; Page 98; 100pp; English.
 XX

XX The invention describes an isolated mammalian cystatin-8 (Zcys8)
 CC polypeptide (1). (1) is useful for: inhibiting cancer procoagulant
 CC protein in an individual and thus inhibiting the thrombotic events
 CC associated with cancer; promoting spermatogenesis, modulating seminal
 CC fluid viscosity, enhancing viability of cryopreserved sperm, sperm
 CC motility and fertilisation; and as antigenic peptides to generate
 CC antibodies. Zcys8 is useful as research reagent for characterising sites
 CC of interaction between Zcys8 and its receptor. Zcys8 is useful in
 CC enhancing fertilisation during assisted reproduction in humans and in
 CC animals. Anti-(1) antibodies are useful to screen biological samples like
 CC blood, urine, saliva, tissue biopsy and autopsy material in vitro for the
 CC presence of Zcys8. The antibodies are also useful to isolate large
 CC quantities of Zcys8 protein and DNA sequences that encode Zcys8 genes.
 CC The polynucleotide encoding (1) is useful to detect and to localise the
 CC expression of a Zcys8 gene in a biological sample and Zcys8
 CC oligonucleotide probes are useful for in vivo diagnosis. The

CC polynucleotide encoding (1) is useful in determining whether a subject's
 CC chromosomes contain a mutation in the Zcys8 gene like aneuploidy, gene
 CC copy number changes, insertions, deletions, restriction site changes and
 CC rearrangements and genetic alterations that inactivate the Zcys8 gene.
 CC This sequence represents an antigenic peptide of human cystatin-8 (Zcys8)
 CC
 XX
 SQ Sequence 80 AA;

Query Match 100.0%; Score 288; DB 5; Length 80;
 Best Local Similarity 100.0%; Pred. No. 6.8e-30;
 Matches 52; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 KESDDKXHFRIFFVLKQROVDHLEYNLVEMQWTTCKPRTTNCVPERE 52
 Db 4 KESDDKXHFRIFFVLKQROVDHLEYNLVEMQWTTCKPRTTNCVPERE 55

RESULT 3

AAU79853
 ID AAU79853 standard; protein; 115 AA.
 AC AAU79853;
 XX
 XX

DT 15-JUL-2002 (first entry)
 XX

DE Human cystatin-8 (Zcys8) antigenic fragment #1.
 XX

KM Cystatin-8; Zcys8; cancer; procoagulant protein; thrombosis;
 KM spermatogenesis; seminal fluid viscosity; cryopreserved sperm;
 KM sperm motility; fertilisation; antigenic fragment.
 XX

OS Homo sapiens.
 XX

PN WO200220567-A2.
 XX

PD 14-MAR-2002.
 XX

PF 29-AUG-2001; 2001WO-US026868.
 XX

PR 01-SEP-2000; 2000US-0230230P.
 XX

PA (ZYMO) ZYMOGENETICS INC.
 XX

PI Holloway JL, Gao Z, Bishop PD;
 XX

DR WPI; 2002-383044/41.
 XX

PT Novel isolated mammalian cystatin-8 polypeptide useful for promoting
 PT spermatogenesis, and inhibiting cancer procoagulant protein which leads
 PT to inhibition of thrombotic events associated with cancer.
 XX

PS Claim 2; Page 94; 100pp; English.
 XX

XX The invention describes an isolated mammalian cystatin-8 (Zcys8)
 CC polypeptide (1). (1) is useful for: inhibiting cancer procoagulant
 CC protein in an individual and thus inhibiting the thrombotic events
 CC associated with cancer; promoting spermatogenesis, modulating seminal
 CC fluid viscosity, enhancing viability of cryopreserved sperm, sperm
 CC motility and fertilisation; and as antigenic peptides to generate
 CC antibodies. Zcys8 is useful as research reagent for characterising sites
 CC of interaction between Zcys8 and its receptor. Zcys8 is useful in
 CC enhancing fertilisation during assisted reproduction in humans and in
 CC animals. Anti-(1) antibodies are useful to screen biological samples like
 CC blood, urine, saliva, tissue biopsy and autopsy material in vitro for the
 CC presence of Zcys8. The antibodies are also useful to isolate large
 CC quantities of Zcys8 protein and DNA sequences that encode Zcys8 genes.
 CC The polynucleotide encoding (1) is useful to detect and to localise the
 CC expression of a Zcys8 gene in a biological sample and Zcys8
 CC oligonucleotide probes are useful for in vivo diagnosis. The
 CC polynucleotide encoding (1) is useful in determining whether a subject's
 CC chromosomes contain a mutation in the Zcys8 gene like aneuploidy, gene
 CC copy number changes, insertions, deletions, restriction site changes and
 CC rearrangements and genetic alterations that inactivate the Zcys8 gene.

CC This sequence represents an antigenic fragment of human cystatin-8
 CC (Zcys8)
 XX
 SQ Sequence 115 AA;
 Query Match 100.0%; Score 288; DB 5; Length 115;
 Best Local Similarity 100.0%; Pred. No. 1e-29;
 Matches 52; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 KESDDKHFRIFRVLKQROVTDHLEHNLVNMQMTTCQKPEITNCVPOERE 52
 DB 34 KESDDKHFRIFRVLKQROVTDHLEHNLVNMQMTTCQKPEITNCVPOERE 85
 RESULT 4
 AAU79854
 ID AAU79854 standard; protein; 117 AA.
 AC AAU79854;
 XX
 DT 15-JUL-2002 (first entry)
 XX
 DE Human cystatin-8 (Zcys8) antigenic fragment #2.
 XX
 KM Cystatin-8; Zcys8; cancer; procoagulant protein; thrombosis;
 KM spermatogenesis; seminal fluid viscosity; cryopreserved sperm;
 KM sperm motility; fertilisation; antigenic fragment.
 XX
 OS Homo sapiens.
 XX
 PN WO200220567-A2.
 XX
 PD 14-MAR-2002.
 XX
 PF 29-AUG-2001; 2001WO-US02668.
 XX
 PR 01-SEP-2000; 2000US-0230230P.
 XX
 PA (ZYMO) ZYMOGENETICS INC.
 XX
 PI Holloway JL, Gao Z, Bishop PD;
 XX
 DR WPI; 2002-383044/41.
 XX
 PT Novel isolated mammalian cystatin-8 polypeptide useful for promoting
 PT spermatogenesis, and inhibiting cancer procoagulant protein which leads
 PT to inhibition of thrombotic events associated with cancer.
 PS
 PS Claim 2; Page 94-95; 100p; English.
 CC The invention describes an isolated mammalian cystatin-8 (Zcys8)
 CC polypeptide (I). (I) is useful for: inhibiting cancer procoagulant
 CC protein in an individual and thus inhibiting the thrombotic events
 CC associated with cancer; promoting spermatogenesis, modulating seminal
 CC fluid viscosity, enhancing viability of cryopreserved sperm, sperm
 CC motility and fertilisation; and as antigenic peptides to generate
 CC antibodies. Zcys8 is useful as research reagent for characterising sites
 CC of interaction between Zcys8 and its receptor. Zcys8 is useful in
 CC enhancing fertilisation during assisted reproduction in humans and in
 CC animals. Anti-(I) antibodies are useful to screen biological samples like
 CC blood, urine, saliva, tissue biopsy and autopsy material in vitro for the
 CC presence of Zcys8. The antibodies are also useful to isolate large
 CC quantities of Zcys8 protein and DNA sequences that encode Zcys8 genes.
 CC The polynucleotide encoding (I) is useful to detect and to localise the
 CC expression of a Zcys8 gene in a biological sample and Zcys8
 CC oligonucleotide probes are useful for in vivo diagnosis. The
 CC polynucleotide encoding (I) is useful in determining whether a subject's
 CC chromosomes contain a mutation in the Zcys8 gene like aneuploidy, gene
 CC copy number changes, insertions, deletions, restriction site changes and
 CC rearrangements and genetic alterations that inactivate the Zcys8 gene.
 CC This sequence represents an antigenic fragment of human cystatin-8
 CC (Zcys8)
 XX

SQ Sequence 117 AA;
 Query Match 100.0%; Score 288; DB 5; Length 117;
 Best Local Similarity 100.0%; Pred. No. 1.1e-29;
 Matches 52; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 KESDDKHFRIFRVLKQROVTDHLEHNLVNMQMTTCQKPEITNCVPOERE 52
 DB 36 KESDDKHFRIFRVLKQROVTDHLEHNLVNMQMTTCQKPEITNCVPOERE 87
 RESULT 5
 AAU79852
 ID AAU79852 standard; protein; 137 AA.
 AC AAU79852;
 XX
 DT 15-JUL-2002 (first entry)
 XX
 DE Human cystatin-8 (Zcys8).
 XX
 KM Cystatin-8; Zcys8; cancer; procoagulant protein; thrombosis;
 KM spermatogenesis; seminal fluid viscosity; cryopreserved sperm;
 KM sperm motility; fertilisation.
 XX
 OS Homo sapiens.
 XX
 PN WO200220567-A2.
 XX
 PD 14-MAR-2002.
 XX
 PF 29-AUG-2001; 2001WO-US02668.
 XX
 PR 01-SEP-2000; 2000US-0230230P.
 XX
 PA (ZYMO) ZYMOGENETICS INC.
 XX
 PI Holloway JL, Gao Z, Bishop PD;
 XX
 DR WPI; 2002-383044/41.
 DR N-PSDB; ABK49522.
 XX
 PT Novel isolated mammalian cystatin-8 polypeptide useful for promoting
 PT spermatogenesis, and inhibiting cancer procoagulant protein which leads
 PT to inhibition of thrombotic events associated with cancer.
 PS
 PS Claim 2; Page 93-94; 100p; English.
 CC The invention describes an isolated mammalian cystatin-8 (Zcys8)
 CC polypeptide (I). (I) is useful for: inhibiting cancer procoagulant
 CC protein in an individual and thus inhibiting the thrombotic events
 CC associated with cancer; promoting spermatogenesis, modulating seminal
 CC fluid viscosity, enhancing viability of cryopreserved sperm, sperm
 CC motility and fertilisation; and as antigenic peptides to generate
 CC antibodies. Zcys8 is useful as research reagent for characterising sites
 CC of interaction between Zcys8 and its receptor. Zcys8 is useful in
 CC enhancing fertilisation during assisted reproduction in humans and in
 CC animals. Anti-(I) antibodies are useful to screen biological samples like
 CC blood, urine, saliva, tissue biopsy and autopsy material in vitro for the
 CC presence of Zcys8. The antibodies are also useful to isolate large
 CC quantities of Zcys8 protein and DNA sequences that encode Zcys8 genes.
 CC The polynucleotide encoding (I) is useful to detect and to localise the
 CC expression of a Zcys8 gene in a biological sample and Zcys8
 CC oligonucleotide probes are useful for in vivo diagnosis. The
 CC polynucleotide encoding (I) is useful in determining whether a subject's
 CC chromosomes contain a mutation in the Zcys8 gene like aneuploidy, gene
 CC copy number changes, insertions, deletions, restriction site changes and
 CC rearrangements and genetic alterations that inactivate the Zcys8 gene.
 CC This is the amino acid sequence of human cystatin-8 (Zcys8)
 SQ Sequence 137 AA;
 Query Match 100.0%; Score 288; DB 5; Length 137;
 XX

Best Local Similarity 100.0%; Pred. No. 1.3e-29;
Matches 52; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 KESDDKXHFRIFRVLKQROVTDHLEYLHNVEMQWTTQCKPRTTN 52
DB 56 KESDDKXHFRIFRVLKQROVTDHLEYLHNVEMQWTTQCKPRTTN 107

RESULT 6
AAU79860

ID AAU79860 standard; peptide; 46 AA.

XX AAU79860;

DT 15-JUL-2002 (first entry)

DE Human cystatin-8 (Zcys8) antigenic fragment #8.

XX Cystatin-8; Zcys8; cancer; procoagulant protein; thrombosis;
KW spermatogenesis; seminal fluid viscosity; cryopreserved sperm;
KM sperm motility; fertilisation; antigenic peptide.

OS Homo sapiens.

XX WO200220567-A2.

XX 14-MAR-2002.

PF 29-AUG-2001; 2001WO-US026868.

PR 01-SEP-2000; 2000US-0230230P.

PA (ZYMO) ZYMOGENETICS INC.

PI Holloway JL, Gao Z, Bishop PD;

XX WPI; 2002-383044/41.

PT Novel isolated mammalian cystatin-8 polypeptide useful for promoting
PT spermatogenesis, and inhibiting cancer procoagulant protein which leads
PT to inhibition of thrombotic events associated with cancer.

PS Claim 2; Page 97; 100pp; English.

XX The invention describes an isolated mammalian cystatin-8 (Zcys8)
CC polypeptide (I). (I) is useful for: inhibiting cancer procoagulant
CC protein in an individual and thus inhibiting the thrombotic events
CC associated with cancer; promoting spermatogenesis, modulating seminal
CC fluid viscosity, enhancing viability of cryopreserved sperm, sperm
CC motility and fertilisation; and as antigenic peptides to generate
CC antibodies. Zcys8 is useful as research reagent for characterising sites
CC of interaction between Zcys8 and its receptor. Zcys8 is useful in
CC enhancing fertilisation during assisted reproduction in humans and in
CC animals. Anti-(I) antibodies are useful to screen biological samples like
CC blood, urine, saliva, tissue biopsy and autopsy material in vitro for the
CC presence of Zcys8. The antibodies are also useful to isolate large
CC quantities of Zcys8 protein and DNA sequences that encode Zcys8 genes.
CC The polynucleotide encoding (I) is useful to detect and to localise the
CC expression of a Zcys8 gene in a biological sample and Zcys8
CC oligonucleotide probes are useful for in vivo diagnosis. The
CC polynucleotide encoding (I) is useful in determining whether a subject's
CC chromosomes contain a mutation in the Zcys8 gene like aneuploidy, gene
CC copy number changes, insertions, deletions, restriction site changes and
CC rearrangements and genetic alterations that inactivate the Zcys8 gene.
CC This sequence represents an antigenic peptide of human cystatin-8 (Zcys8)
XX
SQ Sequence 46 AA;

Query Match 86.1%; Score 248; DB 5; Length 46;
Best Local Similarity 100.0%; Pred. No. 6.1e-25;
Matches 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 KESDDKXHFRIFRVLKQROVTDHLEYLHNVEMQWTTQCKPRTTN 45

DB 2 KESDDKXHFRIFRVLKQROVTDHLEYLHNVEMQWTTQCKPRTTN 46

RESULT 7
AAU79863

ID AAU79863 standard; peptide; 49 AA.

XX AAU79863;

DT 15-JUL-2002 (first entry)

DE Human cystatin-8 (Zcys8) antigenic fragment #11.

XX Cystatin-8; Zcys8; cancer; procoagulant protein; thrombosis;
KW spermatogenesis; seminal fluid viscosity; cryopreserved sperm;
KM sperm motility; fertilisation; antigenic peptide.

OS Homo sapiens.

XX WO200220567-A2.

XX 14-MAR-2002.

PF 29-AUG-2001; 2001WO-US026868.

PR 01-SEP-2000; 2000US-0230230P.

PA (ZYMO) ZYMOGENETICS INC.

PI Holloway JL, Gao Z, Bishop PD;

XX WPI; 2002-383044/41.

PT Novel isolated mammalian cystatin-8 polypeptide useful for promoting
PT spermatogenesis, and inhibiting cancer procoagulant protein which leads
PT to inhibition of thrombotic events associated with cancer.

PS Claim 2; Page 97-98; 100pp; English.

XX The invention describes an isolated mammalian cystatin-8 (Zcys8)
CC polypeptide (I). (I) is useful for: inhibiting cancer procoagulant
CC protein in an individual and thus inhibiting the thrombotic events
CC associated with cancer; promoting spermatogenesis, modulating seminal
CC fluid viscosity, enhancing viability of cryopreserved sperm, sperm
CC motility and fertilisation; and as antigenic peptides to generate
CC antibodies. Zcys8 is useful as research reagent for characterising sites
CC of interaction between Zcys8 and its receptor. Zcys8 is useful in
CC enhancing fertilisation during assisted reproduction in humans and in
CC animals. Anti-(I) antibodies are useful to screen biological samples like
CC blood, urine, saliva, tissue biopsy and autopsy material in vitro for the
CC presence of Zcys8. The antibodies are also useful to isolate large
CC quantities of Zcys8 protein and DNA sequences that encode Zcys8 genes.
CC The polynucleotide encoding (I) is useful to detect and to localise the
CC expression of a Zcys8 gene in a biological sample and Zcys8
CC oligonucleotide probes are useful for in vivo diagnosis. The
CC polynucleotide encoding (I) is useful in determining whether a subject's
CC chromosomes contain a mutation in the Zcys8 gene like aneuploidy, gene
CC copy number changes, insertions, deletions, restriction site changes and
CC rearrangements and genetic alterations that inactivate the Zcys8 gene.
CC This sequence represents an antigenic peptide of human cystatin-8 (Zcys8)
XX
SQ Sequence 49 AA;

Query Match 86.1%; Score 248; DB 5; Length 49;
Best Local Similarity 100.0%; Pred. No. 6.6e-25;
Matches 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 KESDDKXHFRIFRVLKQROVTDHLEYLHNVEMQWTTQCKPRTTN 45
DB 5 KESDDKXHFRIFRVLKQROVTDHLEYLHNVEMQWTTQCKPRTTN 49

RESULT 8
 ID AAU79866 standard; peptide; 59 AA.
 XX
 AC AAU79866;
 XX
 DT 15-JUL-2002 (first entry)
 XX
 DE Human cystatin-8 (Zcys8) antigenic fragment #14.
 XX
 KM Cystatin-8; Zcys8; cancer; procoagulant protein; thrombosis;
 KM spermatogenesis; seminal fluid viscosity; cryopreserved sperm;
 KM sperm motility; fertilisation; antigenic peptide.
 XX
 OS Homo sapiens.
 XX
 PN MO200220567-A2.
 XX
 PD 14-MAR-2002.
 XX
 PF 29-AUG-2001; 2001MO-US026868.
 XX
 PR 01-SEP-2000; 2000US-0230230P.
 XX
 PA (ZYMO) ZYMOGENETICS INC.
 XX
 PI Holloway JL, Gao Z, Bishop PD;
 XX
 DR WPI; 2002-383044/41.
 XX
 PT Novel isolated mammalian cystatin-8 polypeptide useful for promoting
 PT spermatogenesis, and inhibiting cancer procoagulant protein which leads
 PT to inhibition of thrombotic events associated with cancer.
 PS
 PS Claim 2; Page 99; 100pp; English.
 XX
 CC The invention describes an isolated mammalian cystatin-8 (Zcys8)
 CC polypeptide (I). (I) is useful for: inhibiting cancer procoagulant
 CC protein in an individual and thus inhibiting the thrombotic events
 CC associated with cancer; promoting spermatogenesis, modulating seminal
 CC fluid viscosity, enhancing viability of cryopreserved sperm, sperm
 CC motility and fertilisation; and as antigenic peptides to generate
 CC antibodies. Zcys8 is useful as research reagent for characterising sites
 CC of interaction between Zcys8 and its receptor. Zcys8 is useful in
 CC enhancing fertilisation during assisted reproduction in humans and in
 CC animals. Anti-(I) antibodies are useful to screen biological samples like
 CC blood, urine, saliva, tissue biopsy and autopsy material in vitro for the
 CC presence of Zcys8. The antibodies are also useful to isolate large
 CC quantities of Zcys8 protein and DNA sequences that encode Zcys8 genes.
 CC The polynucleotide encoding (I) is useful to detect and to localise the
 CC expression of a Zcys8 gene in a biological sample and Zcys8
 CC oligonucleotide probes are useful for in vivo diagnosis. The
 CC polynucleotide encoding (I) is useful in determining whether a subject's
 CC chromosomes contain a mutation in the Zcys8 gene like aneuploidy, gene
 CC copy number changes, insertions, deletions, restriction site changes and
 CC rearrangements and genetic alterations that inactivate the Zcys8 gene.
 CC This sequence represents an antigenic peptide of human cystatin-8 (Zcys8)
 CC
 XX
 SQ Sequence 59 AA;
 Query Match 67.4%; Score 194; DB 5; Length 59;
 Best Local Similarity 100.0%; Pred. No. 9.6e-18;
 Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 Oy 19 QVTDHLEHYHNVEMQWTTCKPPTNCVPOERE 52
 Db 1 QVTDHLEHYHNVEMQWTTCKPPTNCVPOERE 34
 RESULT 9
 ID AAU79862 standard; peptide; 33 AA.
 XX

AC AAU79862;
 XX
 DT 15-JUL-2002 (first entry)
 XX
 DE Human cystatin-8 (Zcys8) antigenic fragment #10.
 XX
 KM Cystatin-8; Zcys8; cancer; procoagulant protein; thrombosis;
 KM spermatogenesis; seminal fluid viscosity; cryopreserved sperm;
 KM sperm motility; fertilisation; antigenic peptide.
 XX
 OS Homo sapiens.
 XX
 PN MO200220567-A2.
 XX
 PD 14-MAR-2002.
 XX
 PF 29-AUG-2001; 2001MO-US026868.
 XX
 PR 01-SEP-2000; 2000US-0230230P.
 XX
 PA (ZYMO) ZYMOGENETICS INC.
 XX
 PI Holloway JL, Gao Z, Bishop PD;
 XX
 DR WPI; 2002-383044/41.
 XX
 PT Novel isolated mammalian cystatin-8 polypeptide useful for promoting
 PT spermatogenesis, and inhibiting cancer procoagulant protein which leads
 PT to inhibition of thrombotic events associated with cancer.
 PS
 PS Claim 2; Page 97; 100pp; English.
 XX
 CC The invention describes an isolated mammalian cystatin-8 (Zcys8)
 CC polypeptide (I). (I) is useful for: inhibiting cancer procoagulant
 CC protein in an individual and thus inhibiting the thrombotic events
 CC associated with cancer; promoting spermatogenesis, modulating seminal
 CC fluid viscosity, enhancing viability of cryopreserved sperm, sperm
 CC motility and fertilisation; and as antigenic peptides to generate
 CC antibodies. Zcys8 is useful as research reagent for characterising sites
 CC of interaction between Zcys8 and its receptor. Zcys8 is useful in
 CC enhancing fertilisation during assisted reproduction in humans and in
 CC animals. Anti-(I) antibodies are useful to screen biological samples like
 CC blood, urine, saliva, tissue biopsy and autopsy material in vitro for the
 CC presence of Zcys8. The antibodies are also useful to isolate large
 CC quantities of Zcys8 protein and DNA sequences that encode Zcys8 genes.
 CC The polynucleotide encoding (I) is useful to detect and to localise the
 CC expression of a Zcys8 gene in a biological sample and Zcys8
 CC oligonucleotide probes are useful for in vivo diagnosis. The
 CC polynucleotide encoding (I) is useful in determining whether a subject's
 CC chromosomes contain a mutation in the Zcys8 gene like aneuploidy, gene
 CC copy number changes, insertions, deletions, restriction site changes and
 CC rearrangements and genetic alterations that inactivate the Zcys8 gene.
 CC This sequence represents an antigenic peptide of human cystatin-8 (Zcys8)
 CC
 XX
 SQ Sequence 33 AA;
 Query Match 65.6%; Score 189; DB 5; Length 33;
 Best Local Similarity 100.0%; Pred. No. 2.2e-17;
 Matches 33; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 Oy 20 QVTDHLEHYHNVEMQWTTCKPPTNCVPOERE 52
 Db 1 QVTDHLEHYHNVEMQWTTCKPPTNCVPOERE 33
 RESULT 10
 ID AAU79861 standard; peptide; 24 AA.
 XX
 AC AAU79861;
 XX
 DT 15-JUL-2002 (first entry)
 XX

```

DE      Human cystatin-8 (Zcys8) antigenic fragment #9.
XX
XX      Cystatin-8; Zcys8; cancer; procoagulant protein; thrombosis;
KW      spermatogenesis; seminal fluid viscosity; cryopreserved sperm;
XX      sperm motility; fertilisation; antigenic peptide.
XX
XX      Homo sapiens.
OS
XX      WO200220567-A2.
XX
XX      14-MAR-2002.
XX
XX      29-AUG-2001; 2001WO-US026868.
XX
XX      01-SEP-2000; 2000US-0230230P.
XX
XX      (ZYMO ) ZYMOGENETICS INC.
XX
XX      Holloway JL, Gao Z, Bishop PD;
XX      WPI; 2002-383044/41.
XX
XX      Novel isolated mammalian cystatin-8 polypeptide useful for promoting
XX      spermatogenesis, and inhibiting cancer procoagulant protein which leads
XX      to inhibition of thrombotic events associated with cancer.
XX
XX      Claim 2; Page 97; 100pp; English.
XX
XX      The invention describes an isolated mammalian cystatin-8 (Zcys8)
XX      polypeptide (I). (I) is useful for: inhibiting cancer procoagulant
XX      protein in an individual and thus inhibiting the thrombotic events
XX      associated with cancer; promoting spermatogenesis, modulating seminal
XX      fluid viscosity, enhancing viability of cryopreserved sperm, sperm
XX      motility and fertilisation; and as antigenic peptides to generate
XX      antibodies. Zcys8 is useful as research reagent for characterising sites
XX      of interaction between Zcys8 and its receptor. Zcys8 is useful in
XX      enhancing fertilisation during assisted reproduction in humans and in
XX      animals. Anti-(I) antibodies are useful to screen biological samples like
XX      blood, urine, saliva, tissue biopsy and autopsy material in vitro for the
XX      presence of Zcys8. The antibodies are also useful to isolate large
XX      quantities of Zcys8 protein and DNA sequences that encode Zcys8 genes.
XX      The polynucleotide encoding (I) is useful to detect and to localise the
XX      expression of a Zcys8 gene in a biological sample and Zcys8
XX      oligonucleotide probes are useful for in vivo diagnosis. The
XX      polynucleotide encoding (I) is useful in determining whether a subject's
XX      chromosomes contain a mutation in the Zcys8 gene like aneuploidy, gene
XX      copy number changes, insertions, deletions, restriction site changes and
XX      rearrangements and genetic alterations that inactivate the Zcys8 gene.
XX      This sequence represents an antigenic peptide of human cystatin-8 (Zcys8)
XX
XX      Sequence 24 AA;
XX
XX      Query Match          47.9%; Score 138; DB 5; Length 24;
XX      Best Local Similarity 100.0%; Pred. No. 7,2e-11;
XX      Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0.
XX
XX      19 RQVTDHLEHYLNVEMQWTTCKPE 42
XX      |||
XX      |||
XX      1 RQVTDHLEHYLNVEMQWTTCKPE 24
XX
XX      RESULT 11
XX      ID AAU79867 standard; peptide; 48 AA.
XX
XX      AAU79867;
XX
XX      15-JUN-2002 (first entry)
XX
XX      Human cystatin-8 (Zcys8) antigenic fragment #15.
XX
XX      Cystatin-8; Zcys8; cancer; procoagulant protein; thrombosis;
XX      spermatogenesis; seminal fluid viscosity; cryopreserved sperm;

```

KW	sperm motility; fertilisation; antigenic peptide.
XX	
OS	Homo sapiens.
XX	
PN	WO200220567-A2.
XX	
PD	14-MAR-2002.
XX	
PF	29-AUG-2001; 2001WO-US026868.
XX	
PR	01-SEP-2000; 2000US-0230230P.
XX	
PA	(ZYMO) ZYMOGENETICS INC.
XX	
PI	Holloway JL, Gao Z, Bishop PD;
DR	WPI; 2002-383044/41.
PT	Novel isolated mammalian cystatin-8 polypeptide useful for promoting
XX	
PT	spermatogenesis, and inhibiting cancer procogulant protein which leads
XX	
FT	to inhibition of thrombotic events associated with cancer.
XX	
PS	Claim 2; Page 99; 100pp; English.
XX	
CC	The invention describes an isolated mammalian cystatin-8 (Zcys8)
XX	
CC	polypeptide (I). (I) is useful for: inhibiting cancer procogulant
XX	
CC	protein in an individual and thus inhibiting the thrombotic events
XX	
CC	associated with cancer; promoting spermatogenesis, modulating seminal
XX	
CC	fluid viscosity, enhancing viability of cryopreserved sperm, sperm
XX	
CC	motility and fertilisation; and as antigenic peptides to generate
XX	
CC	antibodies. Zcys8 is useful as research reagent for characterising sites
XX	
CC	of interaction between Zcys8 and its receptor. Zcys8 is useful in
XX	
CC	enhancing fertilisation during assisted reproduction in humans and in
XX	
CC	animals. Anti-(I) antibodies are useful to screen biological samples like
XX	
CC	blood, urine, saliva, tissue biopsy and autopsy material in vitro for the
XX	
CC	presence of Zcys8. The antibodies are also useful to isolate large
XX	
CC	quantities of Zcys8 protein and DNA sequences that encode Zcys8 genes.
XX	
CC	The polynucleotide encoding (I) is useful to detect and to localise the
XX	
CC	expression of a Zcys8 gene in a biological sample and Zcys8
XX	
CC	oligonucleotide probes are useful for in vivo diagnosis. The
XX	
CC	polynucleotide encoding (I) is useful in determining whether a subject's
XX	
CC	chromosomes contain a mutation in the Zcys8 gene like aneuploidy, gene
XX	
CC	copy number changes, insertions, deletions, restriction site changes and
XX	
CC	rearrangements and genetic alterations that inactivate the Zcys8 gene.
XX	
CC	This sequence represents an antigenic peptide of human cystatin-8 (Zcys8)
XX	
SQ	Sequence 48 AA;
XX	
Query Match	46.2%; Score 133; DB 5; Length 48;
Best Local Similarity	100.0%; Pred. No. 7.3e-10;
Matches 23; Conservative	0; Mismatches 0; Indels 0; Gaps 0;
Oy	30 NVEMQMTTCCKPEPTTNCVCPQRE 52
db	1 NVEMQMTTCCKPEPTTNCVCPQRE 23
RESULT 12	
ID	AAE02404 standard; protein; 142 AA.
XX	
AC	AAE02404;
XX	
DT	10-AUG-2001 (first entry)
XX	
DB	Murine cystatin-related epididymal specific protein (CRS).
XX	
KM	Murine; cystatin T; zcys3; cystatin-related epididymal specific protein;
XX	
KM	CRS; inhibitor; cysteine proteinase; male reproductive tissue; testis;
XX	
KM	spermatogenesis; therapy; reproductive disorder.
XX	
MS	Mus musculus.
XX	

CC	XX	PS	Disclosure; Col 47-48; 33pp; English.
CC	XX	CC	The present sequence is mouse cystatin-related epididymal specific (CRS)
CC	XX	CC	protein which is homologous to mouse testis specific cystatin T (also
CC	XX	CC	known as zcyg3). The cystatin T polynucleotide is useful in gene therapy
CC	XX	CC	applications, where it is desired to increase or inhibit cystatin T
CC	XX	CC	activity. It is also useful for producing cystatin T polypeptide, as well
CC	XX	CC	as for detecting the expression of a cystatin T gene in a biological
CC	XX	CC	sample. The cystatin T is useful for modulating spermatogenesis, and may
CC	XX	CC	be used to study or modulate that function in vitro or in vivo
CC	XX	CC	systems. In particular, it is also useful for enhancing sperm production,
CC	XX	CC	increasing the number of viable sperm in a sample, or enhancing
CC	XX	CC	fertilisation
CC	XX	CC	Sequence 142 AA:
CC	XX	CC	
CC	XX	CC	Query Match 45.5%; Score 131; DB 4; Length 142;
CC	XX	CC	Best Local Similarity 41.5%; Pred. No. 4.7e-09;
CC	XX	CC	Matches 22; Conservative 16; Mismatches 13; Indels 2; Gaps 1
CC	XX	CC	
CC	XX	CC	1 KESDDKHFRIFPVLYKVGROWTDHEVHIANEMQWTOCKP--ETTNCPQER 51
CC	XX	CC	58 KESDDKVFVLDVKILHAKLQITDRMEYQIDVQISRNCKPLNNFENCIPQCK 110
CC	XX	CC	
CC	XX	CC	RESULT 14
CC	XX	CC	ID ADA14374 standard; protein; 143 AA.
CC	XX	CC	ADA14374;
CC	XX	CC	AD14374;
CC	XX	CC	06-NOV-2003 (first entry)
CC	XX	CC	
CC	XX	CC	Mouse spermatogenesis related protein sequence SEQ ID NO:116.
CC	XX	CC	
CC	XX	CC	mouse; spermatogenesis; gene cluster; mutagenicity;
CC	XX	CC	reproductive toxicity; reproductive capacity; mutation;
CC	XX	CC	expression abnormality; human male sterility associated gene; scot-e;
CC	XX	CC	succinyl CoA:3-oxo acid. CoA transferase; human male sterility.
CC	XX	CC	
CC	XX	CC	Mus musculus.
CC	XX	CC	
CC	XX	CC	WO2003068969-A1.
CC	XX	CC	
CC	XX	CC	21-AUG-2003.
CC	XX	CC	
CC	XX	CC	14-FEB-2003; 2003WO-JP001572.
CC	XX	CC	
CC	XX	CC	14-FEB-2002; 2002JP-00036649.
CC	XX	CC	27-DEC-2002; 2002JP-00381241.
CC	XX	CC	
CC	XX	CC	(NISC-) JAPAN SCI & TECHNOLOGY CORP.
CC	XX	CC	
CC	XX	CC	Nishimune Y, Tanaka H, Nozaki M;
CC	XX	CC	
CC	XX	CC	WPI; 2003-671663/63.
CC	XX	CC	N-PSDB; ADA14477.
CC	XX	CC	
CC	XX	CC	Mouse spermatogenesis gene cluster and human male sterility associated
CC	XX	CC	genes, useful for diagnosis of human male sterility and testing
CC	XX	CC	substances for reproductive toxicity.
CC	XX	CC	
CC	XX	CC	Claim 6; Page 155; 262pp; Japanese.
CC	XX	CC	
CC	XX	CC	The present invention describes a mouse spermatogenesis gene cluster
CC	XX	CC	containing 89 genes (see the cDNA sequences of ADA14442 to ADA14530).
CC	XX	CC	Also described: (1) a cDNA library containing cDNA encoding the gene
CC	XX	CC	cluster; (2) oligonucleotides of 10-99 bases containing partial sequences
CC	XX	CC	of genes of the cluster; (3) microarrays containing these

oligonucleotides; (4) primer sets for PCR amplification of cDNA or genomic DNA for genes of the cluster; (5) polypeptides encoded by the genes in the cluster; (6) antibodies to these polypeptides; (7) a method for testing the mutagenicity and reproductive toxicity of a test substance, and assessment of the reproductive capacity of a test individual, by analysis of mutation and expression abnormalities of genes in the cluster; (8) polynucleotides which are mutations of the human male sterility associated gene scot-c (succln1 CoA:3-oxo acid CoA transferase CC having one or more of the following specific mutations: T123C, T870G, C1071T, T1657C); (9) oligonucleotides containing partial sequences of human scot-c including one or more of the above mutations; (10) primer sets for PCR amplification of mRNA derived from the mutant scot-c gene; (11) polypeptides encoded by human scot-c gene and having one or more of the mutations Leu38Pro, Leu285Arg, Thr352Met; (12) polynucleotides which are mutations of the human male sterility associated gene protamine2, having C248T; (13) polypeptides encoded by this mutant protamine2 gene; (14) antibodies (including labelled antibodies) to these polypeptides; (15) a method for determining the presence or absence of these mutant polynucleotides in genomic DNA; (16) diagnosis of human male sterility using this method; (17) DNA probes containing sequences of these mutant polynucleotides; and (18) DNA chip containing sequences derived from these mutant polynucleotides. The methods of the present invention can be used in the diagnosis of human male sterility; testing the reproductive capacity and mutagenicity of substances; and assessing the reproductive capacity of individuals. The present sequence represents a mouse spermatogenesis related protein, which is encoded by a cDNA sequence from the mouse spermatogenesis gene cluster.

Sequence 143 AA:

Query Match 45.5%; Score 131; DB 6; Length 143;
Best Local Similarity 41.5%; Pred. No. 4,7e-09;
Matches 22; Conservative 16; Mismatches 13; Indels 2; Gaps 1;

QY 1 KESDDKXHFRIFFVLKQVQVTDHLEVHLNVMQWTCQRP--ETTNCVPOER 51
DB 58 KESBDKFLVLDKTLIAKLTQITDMEYHIDVQISRSNCRPLNNTENCIPQK 110

RESULT 15

ADD46708 standard; protein; 142 AA.

ADD46708;

29-JAN-2004 (first entry)

Rat Protein AAC6317, SEQ ID NO 12393.

Rat; pain; neuronal tissue; gene therapy; spinal segmental nerve injury; chronic constriction injury; CCI; spared nerve injury; SNI; Chung.

Rattus norvegicus.

MO2003016475-A2.

27-FEB-2003.

14-AUG-2002; 2002MO-US025765.

14-AUG-2001; 2001US-0312147P.

01-NOV-2001; 2001US-0346382P.

26-NOV-2001; 2001US-0333347P.

(GEHO) GEN HOSPITAL CORP.

(FARB) BAYER AG.

Wolff C, D'urso D, Befort K, Costigan M;

WPI; 2003-268312/26.

GENBANK; AAC6317.

New composition comprising two or more isolated polypeptides, useful for

PT preparing a medicament for treating pain in an animal.
XX
PS Claim 1; Page; 1017pp; English.

XX The invention discloses a composition comprising two or more isolated rat
CC or human polynucleotides or a polynucleotide which represents a fragment,
CC derivative or allelic variation of the nucleic acid sequence. Also
CC claimed are a vector comprising the novel polynucleotide, a host cell
CC comprising the vector, a method for identifying a nucleotide sequence
CC which is differentially regulated in an animal subjected to pain and a
CC kit to perform the method, an array, a method for identifying an agent
CC that increases or decreases the expression of the polynucleotide sequence
CC that is differentially expressed in neuronal tissue of a first animal
CC subjected to pain, a method for identifying a compound which regulates
CC the expression of a polynucleotide sequence which is differentially
CC expressed in an animal subjected to pain, a method for identifying a
CC compound that regulates the activity of one or more of the
CC polynucleotides, a method for producing a pharmaceutical composition, a
CC method for identifying a compound or small molecule that regulates the
CC activity in an animal of one or more of the polypeptides given in the
CC specification, a method for identifying a compound useful in treating
CC pain and a pharmaceutical composition comprising the one or more
CC polypeptides or their antibodies. The polynucleotide or the compound that
CC modulates its activity is useful for preparing a medicament for treating
CC pain (e.g. spinal segmental nerve injury (Chung), chronic constriction
CC injury (CCI) and spared nerve injury (SNI)) in an animal (e.g. gene
CC therapy). The sequence presented is a rat protein (shown in Table 2 of
CC the specification) which is differentially expressed during pain. Note:
CC The sequence data for this patent did not form part of the printed
CC specification, but was obtained in electronic form directly from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences.

Sequence 142 AA:

Query Match 43.1%; Score 124; DB 7; Length 142;
Best Local Similarity 42.3%; Pred. No. 3.9e-08;
Matches 22; Conservative 13; Mismatches 15; Indels 2; Gaps 1;

QY 1 KESDDKXHFRIFFVLKQVQVTDHLEVHLNVMQWTCQRP--ETTNCVPOER 50
DB 58 KESBDKFLVLDKTLIAKLTQITDMEYHIDVQISRSNCRPLNNTENCIPQK 109

Search completed: March 23, 2004, 17:10:27
Job time : 43.5565 secs

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: March 23, 2004, 17:07:14 ; Search time 11.5314 Seconds
(without alignments)
232,804 Million cell updates/sec

Title: US-09-941-314-14

Perfect score: 288
Sequence: 1 KESDDKTHFRIFRYLVKVKQRO.....MOMTTCQKPTTNCVPOGER 52

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 389414 seqs, 51625971 residues

Total number of hits satisfying chosen parameters: 389414

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%
Maximum Match 100%

Listing first 45 summaries

Database : Issued Patents AA: *
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2: /cgn2_6/ptodata/2/1aa/6A_COMB.pep: *
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4: /cgn2_6/ptodata/2/1aa/6B_COMB.pep: *
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6: /cgn2_6/ptodata/2/1aa/6B_COMB.pep: *

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	131	45.5	142	3	US-09-431-480-3 Sequence 3, Appli
2	131	45.5	142	3	US-09-617-302-3 Sequence 3, Appli
3	117	40.6	142	3	US-09-431-480-4 Sequence 4, Appli
4	117	40.6	142	3	US-09-617-302-4 Sequence 4, Appli
5	114	39.6	141	3	US-09-431-480-2 Sequence 2, Appli
6	114	39.6	141	3	US-09-617-302-2 Sequence 2, Appli
7	106	36.8	127	4	US-08-849-303-19 Sequence 19, Appli
8	97	33.7	140	4	US-08-886-319A-46 Sequence 46, Appli
9	97	33.7	140	4	US-08-886-319A-48 Sequence 48, Appli
10	96	33.3	120	4	US-09-775-932-2 Sequence 2, Appli
11	96	33.3	120	6	5432264-4 Patent No. 5432264
12	96	33.3	145	2	US-08-832-535-11 Sequence 11, Appli
13	96	33.3	145	2	US-08-791-522-3 Sequence 3, Appli
14	96	33.3	146	3	US-08-744-138-3 Sequence 3, Appli
15	96	33.3	146	3	US-09-019-485-4 Sequence 4, Appli
16	96	33.3	146	3	US-09-314-777-3 Sequence 3, Appli
17	96	33.3	146	3	US-09-431-480-6 Sequence 6, Appli
18	96	33.3	146	3	US-09-617-302-6 Sequence 6, Appli
19	96	33.3	146	4	US-09-241-376-3 Sequence 3, Appli
20	96	33.3	146	4	US-09-528-436B-3 Sequence 3, Appli
21	96	33.3	146	4	US-09-886-319A-47 Sequence 47, Appli
22	96	33.3	146	4	US-09-940-497-3 Sequence 3, Appli
23	96	33.3	146	4	US-09-976-594-37 Sequence 37, Appli
24	96	33.3	146	4	US-08-849-303-17 Sequence 17, Appli
25	96	33.3	146	5	PCT-US95-07135-9 Patent No. 5432264
26	96	33.3	146	6	5432264-6 Patent No. 5432264
27	93	32.3	140	3	US-09-431-480-5 Sequence 5, Appli

28	93	32.3	140	3	US-09-617-302-5 Sequence 5, Appli
29	93	32.3	140	4	US-08-849-303-18 Sequence 18, Appli
30	92	31.9	112	4	US-08-849-303-16 Sequence 16, Appli
31	92	31.9	118	4	US-09-775-932-24 Sequence 24, Appli
32	88	30.6	116	4	US-09-775-932-16 Sequence 16, Appli
33	88	30.6	139	2	US-08-791-522-4 Sequence 4, Appli
34	88	30.6	139	3	US-09-314-777-4 Sequence 15, Appli
35	88	30.6	139	4	US-08-849-303-15 Sequence 15, Appli
36	83.5	29.0	111	4	US-08-849-303-26 Sequence 26, Appli
37	82	28.5	121	4	US-09-775-932-8 Sequence 8, Appli
38	82	28.5	121	3	US-08-744-138-6 Sequence 6, Appli
39	82	28.5	141	4	US-09-241-376-6 Sequence 6, Appli
40	82	28.5	141	4	US-09-940-497-6 Sequence 6, Appli
41	82	28.5	141	4	US-08-849-303-24 Sequence 24, Appli
42	76.5	26.6	152	4	US-08-849-303-25 Sequence 25, Appli
43	75	26.0	121	4	US-09-775-932-14 Sequence 14, Appli
44	75	26.0	122	4	US-09-775-932-10 Sequence 10, Appli
45	75	26.0	128	4	US-09-775-932-12 Sequence 12, Appli

ALIGNMENTS

```
RESULT 1
US-09-431-480-3
; Sequence 3, Application US/09431480
; Patent No. 6235708
; GENERAL INFORMATION:
; APPLICANT: Holloway, James L.
; APPLICANT: Feldhaus, Andrew
; TITLE OF INVENTION: TESTIS SPECIFIC CYSTATIN-LIKE PROTEIN CYSTATIN T
; FILE REFERENCE: 98-72
; CURRENT APPLICATION NUMBER: US/09/431,480
; EARLIER FILING DATE: 1999-11-01
; EARLIER APPLICATION NUMBER: 60/109,217
; EARLIER FILING DATE: 1998-11-20
; EARLIER APPLICATION NUMBER: 60/156,382
; NUMBER OF SEQ ID NOS: 22
; SOFTWARE: FASTSEQ for Windows Version 3.0
; SEQ ID NO 3
; LENGTH: 142
; TYPE: PRT
; ORGANISM: Mus musculus
US-09-431-480-3

Query Match      45.5%; Score 131; DB 3; Length 142;
Best Local Similarity 41.5%; Pred. No. 3.1e-11;
Matches 22; Conservative 16; Mismatches 13; Indels 2; Gaps 1;

Oy      1 KESDDKTHFRIFRYLVKVKQROVTDHLEYHNAVEMOMTTCQKRP--ETTCVPOGER 51
Db      58 KESDDKTVFLVDKILHAKQITDMEYQIDVOISRSNCKKPLNNTENCIPQKK 110

RESULT 2
US-09-617-302-3
; Sequence 3, Application US/09617302
; Patent No. 6245529
; GENERAL INFORMATION:
; APPLICANT: Holloway, James L.
; APPLICANT: Feldhaus, Andrew
; TITLE OF INVENTION: TESTIS SPECIFIC CYSTATIN-LIKE PROTEIN CYSTATIN T
; FILE REFERENCE: 98-72 C1
; CURRENT APPLICATION NUMBER: US/09/617,302
; EARLIER FILING DATE: 2000-07-17
; EARLIER APPLICATION NUMBER: 09/431,480
; PRIOR FILING DATE: 1999-11-01
; PRIOR APPLICATION NUMBER: 60/109,217
; PRIOR FILING DATE: 1998-11-20
; PRIOR APPLICATION NUMBER: 60/156,382
; PRIOR FILING DATE: 1999-09-28
; NUMBER OF SEQ ID NOS: 22
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SOFTWARE: FastSeq for Windows Version 3.0
SEQ ID NO 3
LENGTH: 142
TYPE: PRT
ORGANISM: Mus musculus
US-09-617-302-3

Query Match 45.5%; Score 131; DB 3; Length 142;
Best Local Similarity 41.5%; Pred. No. 3,1e-11;
Matches 23; Conservative 16; Mismatches 13; Indels 2; Gaps 1;

QY 1 KESDDKXHFRIFRVLKQROVTDHLEVHLNVEQMWTTCCK--ETTCVPOER 51
DB 58 KESBDKYVFLVVKTLQAOQLVTNLEVLIDVEIARSDCRKPLSTNEICAIQE 110

RESULT 3
US-09-431-480-4
Sequence 4, Application US/09431480
Patent No. 6235708
GENERAL INFORMATION:
APPLICANT: Holloway, James L.
APPLICANT: Feldhaus, Andrew
TITLE OF INVENTION: TESTIS SPECIFIC CYSTATIN-LIKE PROTEIN CYSTATIN T
FILE REFERENCE: 98-72
CURRENT APPLICATION NUMBER: US/09/431,480
CURRENT FILING DATE: 1999-11-01
EARLIER APPLICATION NUMBER: 60/109,217
EARLIER FILING DATE: 1998-11-20
EARLIER APPLICATION NUMBER: 60/156,382
EARLIER FILING DATE: 1999-09-28
NUMBER OF SEQ ID NOS: 22
SOFTWARE: FastSeq for Windows Version 3.0
SEQ ID NO 4
LENGTH: 142
TYPE: PRT
ORGANISM: Homo sapiens
US-09-431-480-4

Query Match 40.6%; Score 117; DB 3; Length 142;
Best Local Similarity 48.1%; Pred. No. 3,3e-09;
Matches 25; Conservative 11; Mismatches 14; Indels 2; Gaps 1;

QY 1 KESDDKXHFRIFRVLKQROVTDHLEVHLNVEQMWTTCCK--ETTCVPOER 50
DB 58 KESBDKYVFLVVKTLQAOQLVTNLEVLIDVEIARSDCRKPLSTNEICAIQE 109

RESULT 4
US-09-617-302-4
Sequence 4, Application US/09617302
Patent No. 6245529
GENERAL INFORMATION:
APPLICANT: Holloway, James L.
APPLICANT: Feldhaus, Andrew
TITLE OF INVENTION: TESTIS SPECIFIC CYSTATIN-LIKE PROTEIN CYSTATIN T
FILE REFERENCE: 98-72 C1
CURRENT APPLICATION NUMBER: US/09/617,302
CURRENT FILING DATE: 2000-07-17
PRIOR APPLICATION NUMBER: 09/431,480
PRIOR FILING DATE: 1999-11-01
PRIOR APPLICATION NUMBER: 60/109,217
PRIOR FILING DATE: 1998-11-20
PRIOR APPLICATION NUMBER: 60/156,382
PRIOR FILING DATE: 1999-09-28
NUMBER OF SEQ ID NOS: 22
SOFTWARE: FastSeq for Windows Version 3.0
SEQ ID NO 4
LENGTH: 142
TYPE: PRT
ORGANISM: Homo sapiens
US-09-617-302-4

Query Match 40.6%; Score 117; DB 3; Length 142;
Best Local Similarity 48.1%; Pred. No. 3,3e-09;
Matches 25; Conservative 11; Mismatches 14; Indels 2; Gaps 1;

QY 1 KESDDKXHFRIFRVLKQROVTDHLEVHLNVEQMWTTCCK--ETTCVPOER 50
DB 58 KESBDKYVFLVVKTLQAOQLVTNLEVLIDVEIARSDCRKPLSTNEICAIQE 109

RESULT 5
US-09-431-480-2
Sequence 2, Application US/09431480
Patent No. 6235708
GENERAL INFORMATION:
APPLICANT: Holloway, James L.
APPLICANT: Feldhaus, Andrew
TITLE OF INVENTION: TESTIS SPECIFIC CYSTATIN-LIKE PROTEIN CYSTATIN T
FILE REFERENCE: 98-72
CURRENT APPLICATION NUMBER: US/09/431,480
CURRENT FILING DATE: 1999-11-01
EARLIER APPLICATION NUMBER: 60/109,217
EARLIER FILING DATE: 1998-11-20
EARLIER APPLICATION NUMBER: 60/156,382
EARLIER FILING DATE: 1999-09-28
NUMBER OF SEQ ID NOS: 22
SOFTWARE: FastSeq for Windows Version 3.0
SEQ ID NO 2
LENGTH: 141
TYPE: PRT
ORGANISM: Homo sapiens
US-09-431-480-2

Query Match 39.6%; Score 114; DB 3; Length 141;
Best Local Similarity 44.2%; Pred. No. 8,8e-09;
Matches 23; Conservative 11; Mismatches 16; Indels 2; Gaps 1;

QY 1 KESDDKXHFRIFRVLKQROVTDHLEVHLNVEQMWTTCCK--ETTCVPOER 50
DB 57 KASNDLVNFRVVDILKSQEQITDSLEYVLEVINIARTCKKIADNENCLFQ 108

RESULT 6
US-09-617-302-2
Sequence 2, Application US/09617302
Patent No. 6245529
GENERAL INFORMATION:
APPLICANT: Holloway, James L.
APPLICANT: Feldhaus, Andrew
TITLE OF INVENTION: TESTIS SPECIFIC CYSTATIN-LIKE PROTEIN CYSTATIN T
FILE REFERENCE: 98-72 C1
CURRENT APPLICATION NUMBER: US/09/617,302
CURRENT FILING DATE: 2000-07-17
PRIOR APPLICATION NUMBER: 09/431,480
PRIOR FILING DATE: 1999-11-01
PRIOR APPLICATION NUMBER: 60/109,217
PRIOR FILING DATE: 1998-11-20
PRIOR APPLICATION NUMBER: 60/156,382
PRIOR FILING DATE: 1999-09-28
NUMBER OF SEQ ID NOS: 22
SOFTWARE: FastSeq for Windows Version 3.0
SEQ ID NO 2
LENGTH: 141
TYPE: PRT
ORGANISM: Homo sapiens
US-09-617-302-2

Query Match 39.6%; Score 114; DB 3; Length 141;
Best Local Similarity 44.2%; Pred. No. 8,8e-09;
Matches 23; Conservative 11; Mismatches 16; Indels 2; Gaps 1;

QY 1 KESDDKXHFRIFRVLKQROVTDHLEVHLNVEQMWTTCCK--ETTCVPOER 50
DB 57 KASNDLVNFRVVDILKSQEQITDSLEYVLEVINIARTCKKIADNENCLFQ 108

RESULT 7

US-08-849-303-19
; Sequence 19, Application US/08849303
; Patent No. 6680424
; GENERAL INFORMATION:
; APPLICANT: Atkinson, Howard J.
; APPLICANT: McPherson, Michael J.
; APPLICANT: Utwin, Peter E.
; TITLE OF INVENTION: MODIFIED PROTEINASE INHIBITORS
; NUMBER OF SEQUENCES: 79
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Klauber & Jackson
; STREET: 411 Hackensack Avenue, 4th floor
; CITY: Hackensack
; STATE: New Jersey
; COUNTRY: USA
; ZIP: 07601
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/849,303
; FILING DATE: 21-MAY-1997
; CLASSIFICATION: 514
; ATTORNEY/AGENT INFORMATION:
; NAME: Jackson Beg., David A.
; REGISTRATION NUMBER: 26,742
; REFERENCE/DOCKET NUMBER: 1321-1-003
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 201-487-5800
; TELEFAX: 201-343-1684
; TELEX: 133521
; INFORMATION FOR SEQ ID NO: 19:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 127 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; HYPOTHEICAL: NO
; US-08-849-303-19

Query Match 36.8%; Score 106; DB 4; Length 127;
Best Local Similarity 43.8%; Pred. No. 1.1e-07;
Matches 21; Conservative 11; Mismatches 14; Indels 2; Gaps 1;

Oy 1 KESDDKHFRIFRVLKQROVTDHLEHLNVEMQMTTCQKPE--TNC 46
Db 43 KGSNDAYHSRAIQVVRARQKLVAGVNYFLDVENMGRITTCSTQNLTDNC 90

RESULT 8

US-09-886-319A-46
; Sequence 46, Application US/09886319A
; Patent No. 6586185
; GENERAL INFORMATION:
; APPLICANT: Wolf, Eckard
; APPLICANT: Werner, Sabine
; APPLICANT: Halle, Jörn-Peter
; APPLICANT: Regenbogen, Johannes
; APPLICANT: Goppelt, Andreas
; TITLE OF INVENTION: Use of Polypeptides or Nucleic Acids for
; TITLE OF INVENTION: the Diagnosis or Treatment of Skin Disorders and Wound
; TITLE OF INVENTION: Healing and for the Identification of Pharmacologically
; TITLE OF INVENTION: Active Substances
; FILE REFERENCE: 50125/014002
; CURRENT APPLICATION NUMBER: US/09/886,319A
; CURRENT FILING DATE: 2001-06-20
; PRIOR APPLICATION NUMBER: US 60/222,081

; PRIOR FILING DATE: 2000-08-01
; PRIOR APPLICATION NUMBER: DE 10030149.5
; PRIOR FILING DATE: 2000-06-20
; NUMBER OF SEQ ID NOS: 84
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 46
; LENGTH: 140
; TYPE: PRT
; ORGANISM: Mus musculus
; US-09-886-319A-46

Query Match 33.7%; Score 97; DB 4; Length 140;
Best Local Similarity 41.7%; Pred. No. 2.5e-06;
Matches 20; Conservative 11; Mismatches 15; Indels 2; Gaps 1;

Oy 1 KESDDKHFRIFRVLKQROVTDHLEHLNVEMQMTTCQKPE--TNC 46
Db 56 KGSNDAYHSRAIQVVRARQKLVAGVNYFLDVENMGRITTCSTQNLTDNC 103

RESULT 9

US-09-886-319A-48
; Sequence 48, Application US/09886319A
; Patent No. 6586185
; GENERAL INFORMATION:
; APPLICANT: Wolf, Eckard
; APPLICANT: Werner, Sabine
; APPLICANT: Halle, Jörn-Peter
; APPLICANT: Regenbogen, Johannes
; APPLICANT: Goppelt, Andreas
; TITLE OF INVENTION: Use of Polypeptides or Nucleic Acids for
; TITLE OF INVENTION: the Diagnosis or Treatment of Skin Disorders and Wound
; TITLE OF INVENTION: Healing and for the Identification of Pharmacologically
; TITLE OF INVENTION: Active Substances
; FILE REFERENCE: 50125/014002
; CURRENT APPLICATION NUMBER: US/09/886,319A
; CURRENT FILING DATE: 2001-06-20
; PRIOR APPLICATION NUMBER: US 60/222,081
; PRIOR FILING DATE: 2000-08-01
; PRIOR APPLICATION NUMBER: DE 10030149.5
; PRIOR FILING DATE: 2000-06-20
; NUMBER OF SEQ ID NOS: 84
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 48
; LENGTH: 140
; TYPE: PRT
; ORGANISM: Mus musculus
; US-09-886-319A-48

Query Match 33.7%; Score 97; DB 4; Length 140;
Best Local Similarity 41.7%; Pred. No. 2.5e-06;
Matches 20; Conservative 11; Mismatches 15; Indels 2; Gaps 1;

Oy 1 KESDDKHFRIFRVLKQROVTDHLEHLNVEMQMTTCQKPE--TNC 46
Db 56 KGSNDAYHSRAIQVVRARQKLVAGVNYFLDVENMGRITTCSTQNLTDNC 103

RESULT 10

US-09-775-932-2
; Sequence 2, Application US/09775932
; Patent No. 6534477
; GENERAL INFORMATION:
; APPLICANT: Universit of British Columbia
; TITLE OF INVENTION: Production and use of Modified Cystatins
; FILE REFERENCE: 58069
; CURRENT APPLICATION NUMBER: US/09/775,932
; CURRENT FILING DATE: 2001-02-02
; PRIOR APPLICATION NUMBER: CA99/00717
; PRIOR FILING DATE: 1999-08-05
; PRIOR APPLICATION NUMBER: 60/095,503
; PRIOR FILING DATE: 1998-08-05
; NUMBER OF SEQ ID NOS: 32

SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 2
LENGTH: 120
TYPE: PRT
ORGANISM: Homo sapiens
US-09-775-932-2

Query Match 33.3%; Score 96; DB 4; Length 120;
Best Local Similarity 39.6%; Pred. No. 2.8e-06;
Matches 19; Conservative 10; Mismatches 17; Indels 2; Gaps 1;

QY 1 KESDDKXHFRIFRVLKQROVTDLHLYLVNEMQWTTQCK--PETTNC 46
36 KASNDWYHSRALQVVRARKQIVAGVNYFLDVELGRTTCTKQPNLDNC 83

RESULT 11
5432264-4

PATENT NO. 5432264
APPLICANT: GRUBB, ANDERS; LUNDWALL, AKE; ABRAHAMSON, MAGNUS;
DALBOGE, HENRIK
TITLE OF INVENTION: RECOMBINANT 3-DHS-OH-CYSTATIN C PRODUCED
BY EXPRESSION IN A PROCARYOTIC HOST CELL
NUMBER OF SEQUENCES: 8
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/929,290
FILING DATE: 13-AUG-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 440,221
FILING DATE: 21-NOV-1989
APPLICATION NUMBER: 297,198
FILING DATE: 20-MAY-1988
SEQ ID NO: 4
LENGTH: 120

5432264-4

Query Match 33.3%; Score 96; DB 6; Length 120;
Best Local Similarity 39.6%; Pred. No. 2.8e-06;
Matches 19; Conservative 10; Mismatches 17; Indels 2; Gaps 1;

QY 1 KESDDKXHFRIFRVLKQROVTDLHLYLVNEMQWTTQCK--PETTNC 46
36 KASNDWYHSRALQVVRARKQIVAGVNYFLDVELGRTTCTKQPNLDNC 83

RESULT 12
US-08-832-535-11

SEQUENCE 11, Application US/08832535
PATENT NO. 5919658

GENERAL INFORMATION:
APPLICANT: NI, JIAN
APPLICANT: LI, HAODONG
APPLICANT: YU, GUO-LIANG
APPLICANT: GENTZ, REINER L
TITLE OF INVENTION: HUMAN CYSTATIN F
NUMBER OF SEQUENCES: 11
CORRESPONDENCE ADDRESS:
ADDRESSEE: HUMAN GENOME SCIENCES, INC.
STREET: 9410 KEY WEST AVENUE
CITY: ROCKVILLE
STATE: MD
COUNTRY: US
ZIP: 20850

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, Version #1.30

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/832,535

FILING DATE: 03-APR-1997

CLASSIFICATION: 435

ATTORNEY/AGENT INFORMATION:

NAME: KIMBALL, PAUL C.
REGISTRATION NUMBER: 34,610
REFERENCE/DOCKET NUMBER: PF265
TELECOMMUNICATION INFORMATION:
TELEPHONE: (201) 994-1700
TELEFAX: (201) 994-1744
INFORMATION FOR SEQ ID NO: 11:
SEQUENCE CHARACTERISTICS:
LENGTH: 145 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: peptide
US-08-832-535-11

Query Match 33.3%; Score 96; DB 2; Length 145;
Best Local Similarity 39.6%; Pred. No. 3.6e-06;
Matches 19; Conservative 10; Mismatches 17; Indels 2; Gaps 1;

QY 1 KESDDKXHFRIFRVLKQROVTDLHLYLVNEMQWTTQCK--PETTNC 46
62 KASNDWYHSRALQVVRARKQIVAGVNYFLDVELGRTTCTKQPNLDNC 109

RESULT 13
US-08-791-522-3
SEQUENCE 3, Application US/08791522
PATENT NO. 5935817

GENERAL INFORMATION:
APPLICANT: Bandman, Olga
APPLICANT: GOLL, SURYA K.
TITLE OF INVENTION: NOVEL HUMAN CYSTATIN-LIKE
NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
ADDRESSEE: Incyte Pharmaceuticals, Inc.
STREET: 3174 Porter Drive
CITY: Palo Alto
STATE: CA
COUNTRY: USA
ZIP: 94304

COMPUTER READABLE FORM:

MEDIUM TYPE: Diskette

COMPUTER: IBM Compatible

OPERATING SYSTEM: DOS

SOFTWARE: FastSeq for Windows Version 2.0

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/791,522

FILING DATE: Filed Herewith

CLASSIFICATION: 514

PRIOR APPLICATION DATA:

APPLICATION NUMBER:

FILING DATE:

ATTORNEY/AGENT INFORMATION:

NAME: Billings, Lucy J.

REGISTRATION NUMBER: 36,749

REFERENCE/DOCKET NUMBER: PF-0193 US

TELECOMMUNICATION INFORMATION:

TELEPHONE: 415-855-0555

TELEFAX: 415-845-4166

INFORMATION FOR SEQ ID NO: 3:

SEQUENCE CHARACTERISTICS:

LENGTH: 146 amino acids

TYPE: amino acid

STRANDEDNESS: single

TOPOLOGY: linear

IMMEDIATE SOURCE:

LIBRARY: GenBank

CLONE: 181387

US-08-791-522-3

Query Match 33.3%; Score 96; DB 2; Length 146;
Best Local Similarity 39.6%; Pred. No. 3.6e-06;

Matches 19; Conservative 10; Mismatches 17; Indels 2; Gaps 1;

QY 1 KESDDKXHFRIFRVLKQROVTDHLEHNLVEMQWTTCK--PETTNC 46
DB 62 KASNDMTHSRALQVVRARKQIVAGVNYFLDVELGRITTCCTKQFPLDNC 109

RESULT 14
US-08-744-138-3

Sequence 3, Application US/08744138

Patent No. 6011012

GENERAL INFORMATION:

APPLICANT: Gentz, Retner L.

APPLICANT: Ni, Jian

APPLICANT: Rosen, Craig A.

APPLICANT: Yu, Guo-Liang

TITLE OF INVENTION: Human Cystatin E

NUMBER OF SEQUENCES: 13

CORRESPONDENCE ADDRESS:

ADDRESSEE: Human Genome Sciences, Inc.

STREET: 9410 Key West Avenue

CITY: Rockville

STATE: Maryland

COUNTRY: USA

ZIP: 20850

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patent in Release #1.0, Version #1.30

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/744,138

FILING DATE:

CLASSIFICATION: 435

ATTORNEY/AGENT INFORMATION:

NAME: Brookes, A. Anders

REGISTRATION NUMBER: 36,373

REFERENCE/DOCKET NUMBER: PP202P1

TELECOMMUNICATION INFORMATION:

TELEPHONE: 301 309 8504

TELEFAX: 301 309 8512

INFORMATION FOR SEQ ID NO: 3:

SEQUENCE CHARACTERISTICS:

LENGTH: 146 amino acids

TYPE: amino acid

STRANDEDNESS:

TOPOLOGY: linear

MOLECULE TYPE: protein

HYPOTHETICAL: NO

ORIGINAL SOURCE:

INDIVIDUAL ISOLATE: Cystatin C

US-08-744-138-3

Query Match 33.3%; Score 96; DB 3; Length 146;

Best Local Similarity 39.6%; Pred. No. 3.6e-06;

Matches 19; Conservative 10; Mismatches 17; Indels 2; Gaps 1;

QY 1 KESDDKXHFRIFRVLKQROVTDHLEHNLVEMQWTTCK--PETTNC 46

DB 62 KASNDMTHSRALQVVRARKQIVAGVNYFLDVELGRITTCCTKQFPLDNC 109

RESULT 15

US-09-019-485-4

Sequence 4, Application US/09019485

Patent No. 6066617

GENERAL INFORMATION:

APPLICANT: Li, Haodong

APPLICANT: Yu, Guo-Liang

APPLICANT: Gentz, Retner

APPLICANT: Ni, Jian

TITLE OF INVENTION: Cystatin F

NUMBER OF SEQUENCES: 17

CORRESPONDENCE ADDRESS:

ADDRESSEE: Human Genome Sciences, Inc.

STREET: 9410 Key West Avenue

CITY: Rockville

STATE: MD

COUNTRY: US

ZIP: 20850

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patent in Release #1.0, Version #1.30

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/019,485

FILING DATE:

CLASSIFICATION:

ATTORNEY/AGENT INFORMATION:

NAME: Benson, Robert H.

REGISTRATION NUMBER: 30,446

REFERENCE/DOCKET NUMBER: PP265P1

TELECOMMUNICATION INFORMATION:

TELEPHONE: 3013098504

TELEFAX: 3013098439

INFORMATION FOR SEQ ID NO: 4:

SEQUENCE CHARACTERISTICS:

LENGTH: 146 amino acids

TYPE: amino acid

STRANDEDNESS: single

TOPOLOGY: linear

MOLECULE TYPE: protein

US-09-019-485-4

Query Match 33.3%; Score 96; DB 3; Length 146;

Best Local Similarity 39.6%; Pred. No. 3.6e-06;

Matches 19; Conservative 10; Mismatches 17; Indels 2; Gaps 1;

QY 1 KESDDKXHFRIFRVLKQROVTDHLEHNLVEMQWTTCK--PETTNC 46

DB 62 KASNDMTHSRALQVVRARKQIVAGVNYFLDVELGRITTCCTKQFPLDNC 109

Search completed: March 23, 2004, 17:15:30

Job time: 12.5314 secs

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: March 23, 2004, 17:10:34 ; Search time 28.0669 Seconds
(Without alignments)
479.770 Million cell updates/sec

Title: US-09-941-314-14

Perfect score: 288
Sequence: 1 KESDDKXHFRIPLVAKVQRQ.....MOWTQCKPRTNCVPOERE 52

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1049977 seqs, 258955339 residues

Total number of hits satisfying chosen parameters: 1049977

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%

Listing first 45 summaries

Database :

Published Applications AA:*

- 1: /cgn2_6/ptodata/1/pubppa/US07_PUBCOMB.pap:*
- 2: /cgn2_6/ptodata/1/pubppa/PCT_NEW_PUB.pap:*
- 3: /cgn2_6/ptodata/1/pubppa/US06_NEW_PUB.pap:*
- 4: /cgn2_6/ptodata/1/pubppa/US06_PUBCOMB.pap:*
- 5: /cgn2_6/ptodata/1/pubppa/US07_NEW_PUB.pap:*
- 6: /cgn2_6/ptodata/1/pubppa/CTUS_PUBCOMB.pap:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	288	100.0	52	9	US-09-941-314-14 Sequence 14, Appl
2	288	100.0	80	9	US-09-941-314-15 Sequence 3, Appl
3	288	100.0	115	9	US-09-941-314-3 Sequence 15, Appl
4	288	100.0	117	9	US-09-941-314-4 Sequence 4, Appl
5	288	100.0	137	9	US-09-941-314-2 Sequence 2, Appl
6	248	86.1	46	9	US-09-941-314-10 Sequence 10, Appl
7	248	86.1	49	9	US-09-941-314-13 Sequence 13, Appl
8	194	67.4	59	9	US-09-941-314-16 Sequence 16, Appl
9	189	65.6	33	9	US-09-941-314-12 Sequence 12, Appl
10	138	47.9	24	9	US-09-941-314-11 Sequence 11, Appl
11	133	46.2	48	9	US-09-941-314-17 Sequence 17, Appl
12	119	41.3	27	9	US-09-941-314-9 Sequence 9, Appl
13	119	41.3	35	9	US-09-941-314-8 Sequence 8, Appl
14	106	36.8	127	8	US-08-849-303-19 Sequence 19, Appl
15	104	36.1	50	9	US-09-864-761-34822 Sequence 34822, A

16	104	36.1	50	9	US-09-864-761-48936 Sequence 48936, A
17	103	35.8	145	9	US-09-740-638-2 Sequence 2, Appl
18	103	35.8	145	13	US-10-005-467-2 Sequence 2, Appl
19	103	35.8	145	14	US-10-235-148-2 Sequence 2, Appl
20	97	33.7	140	14	US-10-376-564-46 Sequence 46, Appl
21	97	33.7	140	14	US-10-376-564-48 Sequence 48, Appl
22	97	33.7	145	14	US-10-168-425-14 Sequence 14, Appl
23	96	33.3	120	9	US-09-775-932-2 Sequence 2, Appl
24	96	33.3	146	8	US-08-849-303-17 Sequence 17, Appl
25	96	33.3	146	9	US-09-940-497-3 Sequence 3, Appl
26	96	33.3	146	9	US-09-969-834-3 Sequence 3, Appl
27	96	33.3	146	14	US-10-329-428-3 Sequence 3, Appl
28	96	33.3	146	14	US-10-376-564-47 Sequence 47, Appl
29	95	33.0	181	15	US-10-264-049-2608 Sequence 2608, Ap
30	93	32.3	140	8	US-08-849-303-18 Sequence 18, Appl
31	92	31.9	112	8	US-08-849-303-16 Sequence 16, Appl
32	92	31.9	118	9	US-09-775-932-24 Sequence 24, Appl
33	88	30.6	116	9	US-09-775-932-16 Sequence 16, Appl
34	88	30.6	139	8	US-08-849-303-15 Sequence 15, Appl
35	88	30.6	139	9	US-09-969-834-4 Sequence 4, Appl
36	83.5	29.0	111	8	US-08-849-303-26 Sequence 26, Appl
37	83	28.8	165	9	US-09-740-638-5 Sequence 5, Appl
38	83	28.8	165	13	US-10-006-467-5 Sequence 5, Appl
39	83	28.8	165	14	US-10-235-148-5 Sequence 5, Appl
40	82	28.5	121	9	US-09-775-932-8 Sequence 8, Appl
41	82	28.5	141	8	US-08-849-303-24 Sequence 24, Appl
42	82	28.5	141	9	US-09-940-497-6 Sequence 6, Appl
43	76.5	26.6	152	8	US-08-849-303-25 Sequence 25, Appl
44	75	26.0	121	9	US-09-775-932-14 Sequence 14, Appl
45	75	26.0	122	9	US-09-775-932-10 Sequence 10, Appl

ALIGNMENTS

RESULT 1
US-09-941-314-14
Sequence 14, Application US/09941314
Patent No. US20020142396A1
GENERAL INFORMATION:
APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-B and Its Use to
TITLE OF INVENTION: Inhibit Cancer Procoagulant Protein
FILE REFERENCE: 00-81PC
CURRENT APPLICATION NUMBER: US/09/941,314
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
NUMBER OF SEQ ID NOS: 19
SOFTWARE: FASTSEQ for Windows Version 4.0
SEQ ID NO 14
LENGTH: 52
TYPE: PRT
ORGANISM: Homo sapiens
US-09-941-314-14

Query Match 100.0%; Score 288; DB 9; Length 52;
Best Local Similarity 100.0%; Pred. No. 1.7e-30;
Matches 52; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 KESDDKXHFRIPLVAKVQRQVTHLEHLNVEOMTQCKPRTNCVPOERE 52
DB 1 KESDDKXHFRIPLVAKVQRQVTHLEHLNVEOMTQCKPRTNCVPOERE 52

RESULT 2
US-09-941-314-15
Sequence 15, Application US/09941314
Patent No. US20020142396A1
GENERAL INFORMATION:
APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-B and Its Use to
TITLE OF INVENTION: Inhibit Cancer Procoagulant Protein

FILE REFERENCE: 00-81PC
CURRENT APPLICATION NUMBER: US/09/941,314
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
NUMBER OF SEQ ID NOS: 19
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 15
LENGTH: 80
TYPE: PRT
ORGANISM: Homo sapiens
US-09-941-314-15

Query Match 100.0%; Score 288; DB 9; Length 80;
Best Local Similarity 100.0%; Pred. No. 2,8e-30;
Matches 52; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 KESDDKXHFRIFFVLKVQROVTDHLEVHLNVEMQWTTCCQRPETTCVPOERE 52
DB 4 KESDDKXHFRIFFVLKVQROVTDHLEVHLNVEMQWTTCCQRPETTCVPOERE 55

RESULT 3
US-09-941-314-3
Sequence 3, Application US/09941314
Patent No. US20020142396A1
GENERAL INFORMATION:

APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
FILE REFERENCE: 00-81PC
CURRENT APPLICATION NUMBER: US/09/941,314
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
NUMBER OF SEQ ID NOS: 19
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 3
LENGTH: 115
TYPE: PRT
ORGANISM: Homo sapiens
US-09-941-314-3

Query Match 100.0%; Score 288; DB 9; Length 115;
Best Local Similarity 100.0%; Pred. No. 4,3e-30;
Matches 52; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 KESDDKXHFRIFFVLKVQROVTDHLEVHLNVEMQWTTCCQRPETTCVPOERE 52
DB 34 KESDDKXHFRIFFVLKVQROVTDHLEVHLNVEMQWTTCCQRPETTCVPOERE 85

RESULT 4
US-09-941-314-4
Sequence 4, Application US/09941314
Patent No. US20020142396A1
GENERAL INFORMATION:

APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
FILE REFERENCE: 00-81PC
CURRENT APPLICATION NUMBER: US/09/941,314
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
NUMBER OF SEQ ID NOS: 19
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 4
LENGTH: 117
TYPE: PRT
ORGANISM: Homo sapiens
US-09-941-314-4

Query Match 100.0%; Score 288; DB 9; Length 117;
Best Local Similarity 100.0%; Pred. No. 4,4e-30;
Matches 52; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 KESDDKXHFRIFFVLKVQROVTDHLEVHLNVEMQWTTCCQRPETTCVPOERE 52
DB 36 KESDDKXHFRIFFVLKVQROVTDHLEVHLNVEMQWTTCCQRPETTCVPOERE 87

RESULT 5
US-09-941-314-2
Sequence 2, Application US/09941314
Patent No. US20020142396A1
GENERAL INFORMATION:

APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
FILE REFERENCE: 00-81PC
CURRENT APPLICATION NUMBER: US/09/941,314
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
NUMBER OF SEQ ID NOS: 19
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 2
LENGTH: 137
TYPE: PRT
ORGANISM: Homo sapiens
US-09-941-314-2

Query Match 100.0%; Score 288; DB 9; Length 137;
Best Local Similarity 100.0%; Pred. No. 5,3e-30;
Matches 52; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 KESDDKXHFRIFFVLKVQROVTDHLEVHLNVEMQWTTCCQRPETTCVPOERE 52
DB 56 KESDDKXHFRIFFVLKVQROVTDHLEVHLNVEMQWTTCCQRPETTCVPOERE 107

RESULT 6
US-09-941-314-10
Sequence 10, Application US/09941314
Patent No. US20020142396A1
GENERAL INFORMATION:

APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
FILE REFERENCE: 00-81PC
CURRENT APPLICATION NUMBER: US/09/941,314
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
NUMBER OF SEQ ID NOS: 19
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 10
LENGTH: 46
TYPE: PRT
ORGANISM: Homo sapiens
US-09-941-314-10

Query Match 86.1%; Score 248; DB 9; Length 46;
Best Local Similarity 100.0%; Pred. No. 2,8e-25;
Matches 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 KESDDKXHFRIFFVLKVQROVTDHLEVHLNVEMQWTTCCQRPETTCVPOERE 45
DB 2 KESDDKXHFRIFFVLKVQROVTDHLEVHLNVEMQWTTCCQRPETTCVPOERE 46

RESULT 7
US-09-941-314-13
Sequence 13, Application US/09941314
Patent No. US20020142396A1

```
/ GENERAL INFORMATION:
/ APPLICANT: Zymogenetics, Inc.
/ TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
/ TITLE OF INVENTION: Inhibit Cancer Procoagulant Protein
/ FILE REFERENCE: 00-81PC
/ CURRENT APPLICATION NUMBER: US/09/941,314
/ CURRENT FILING DATE: 2001-08-29
/ PRIOR APPLICATION NUMBER: 60/230,230
/ PRIOR FILING DATE: 2001-09-01
/ NUMBER OF SEQ ID NOS: 19
/ SOFTWARE: FastSeq for Windows Version 4.0
/ SEQ ID NO 13
/ LENGTH: 49
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-09-941-314-13

Query Match      86.1%; Score 248; DB 9; Length 49;
Best Local Similarity 100.0%; Pred. No. 3e-25;
Matches 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Cy      1 KESDDKTHFRIPRLKVGQVTDHLEHYHLNVMQWTTCKPRTTN 45
Db      5 KESDDKTHFRIPRLKVGQVTDHLEHYHLNVMQWTTCKPRTTN 49

RESULT 8
US-09-941-314-16
/ Sequence 16, Application US/09941314
/ Patent No. US20020142396A1
/ GENERAL INFORMATION:
/ APPLICANT: Zymogenetics, Inc.
/ TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
/ TITLE OF INVENTION: Inhibit Cancer Procoagulant Protein
/ FILE REFERENCE: 00-81PC
/ CURRENT APPLICATION NUMBER: US/09/941,314
/ CURRENT FILING DATE: 2001-08-29
/ PRIOR APPLICATION NUMBER: 60/230,230
/ PRIOR FILING DATE: 2001-09-01
/ NUMBER OF SEQ ID NOS: 19
/ SOFTWARE: FastSeq for Windows Version 4.0
/ SEQ ID NO 16
/ LENGTH: 59
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-09-941-314-16

Query Match      67.4%; Score 194; DB 9; Length 59;
Best Local Similarity 100.0%; Pred. No. 4.8e-18;
Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Cy      19 ROVTDHLEHYHLNVMQWTTCKPRTTNCVPOERE 52
Db      1 ROVTDHLEHYHLNVMQWTTCKPRTTNCVPOERE 34

RESULT 9
US-09-941-314-12
/ Sequence 12, Application US/09941314
/ Patent No. US20020142396A1
/ GENERAL INFORMATION:
/ APPLICANT: Zymogenetics, Inc.
/ TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
/ TITLE OF INVENTION: Inhibit Cancer Procoagulant Protein
/ FILE REFERENCE: 00-81PC
/ CURRENT APPLICATION NUMBER: US/09/941,314
/ CURRENT FILING DATE: 2001-08-29
/ PRIOR APPLICATION NUMBER: 60/230,230
/ PRIOR FILING DATE: 2001-09-01
/ NUMBER OF SEQ ID NOS: 19
/ SOFTWARE: FastSeq for Windows Version 4.0
/ SEQ ID NO 12
/ LENGTH: 33
```

```
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-09-941-314-12

Query Match      65.6%; Score 189; DB 9; Length 33;
Best Local Similarity 100.0%; Pred. No. 1.1e-17;
Matches 33; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Cy      20 QVTDHLEHYHLNVMQWTTCKPRTTNCVPOERE 52
Db      1 QVTDHLEHYHLNVMQWTTCKPRTTNCVPOERE 33

RESULT 10
US-09-941-314-11
/ Sequence 11, Application US/09941314
/ Patent No. US20020142396A1
/ GENERAL INFORMATION:
/ APPLICANT: Zymogenetics, Inc.
/ TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
/ TITLE OF INVENTION: Inhibit Cancer Procoagulant Protein
/ FILE REFERENCE: 00-81PC
/ CURRENT APPLICATION NUMBER: US/09/941,314
/ CURRENT FILING DATE: 2001-08-29
/ PRIOR APPLICATION NUMBER: 60/230,230
/ PRIOR FILING DATE: 2001-09-01
/ NUMBER OF SEQ ID NOS: 19
/ SOFTWARE: FastSeq for Windows Version 4.0
/ SEQ ID NO 11
/ LENGTH: 24
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-09-941-314-11

Query Match      47.9%; Score 138; DB 9; Length 24;
Best Local Similarity 100.0%; Pred. No. 4.1e-11;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Cy      19 ROVTDHLEHYHLNVMQWTTCKPKE 42
Db      1 ROVTDHLEHYHLNVMQWTTCKPKE 24

RESULT 11
US-09-941-314-17
/ Sequence 17, Application US/09941314
/ Patent No. US20020142396A1
/ GENERAL INFORMATION:
/ APPLICANT: Zymogenetics, Inc.
/ TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
/ TITLE OF INVENTION: Inhibit Cancer Procoagulant Protein
/ FILE REFERENCE: 00-81PC
/ CURRENT APPLICATION NUMBER: US/09/941,314
/ CURRENT FILING DATE: 2001-08-29
/ PRIOR APPLICATION NUMBER: 60/230,230
/ PRIOR FILING DATE: 2001-09-01
/ NUMBER OF SEQ ID NOS: 19
/ SOFTWARE: FastSeq for Windows Version 4.0
/ SEQ ID NO 17
/ LENGTH: 48
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-09-941-314-17

Query Match      46.2%; Score 133; DB 9; Length 48;
Best Local Similarity 100.0%; Pred. No. 4.1e-10;
Matches 23; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Cy      30 NVEMQWTTCKPRTTNCVPOERE 52
Db      1 NVEMQWTTCKPRTTNCVPOERE 23
```

```

US-09-941-314-9
RESULT 12
Sequence 9, Application US/09941314
Patent No. US20020142396A1
GENERAL INFORMATION:
APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cytactin-8
TITLE OF INVENTION: Inhibit Cancer Procc
FILE REFERENCE: 00-81PC
CURRENT APPLICATION NUMBER: US/09/941,314
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
NUMBER OF SEQ ID NOS: 19
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 9
LENGTH: 27
TYPE: prt
ORGANISM: Homo sapiens
US-09-941-314-9

```

Query Match	41.3%	Score	119	DB	9	Length	27
Best Local Similarity	100.0%	Pred. No.	1.5e-08				
Matches	23	Conservative	0	Mismatches	0	Indels	0
						Gaps	0

[illegible]

```

RESULT 13
US-09-941-314-8
Sequence 8, Application US/09941314
Patent No. US20020142396A1
GENERAL INFORMATION:
APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cycstatin-8
FILE REFERENCE: 00-81PC
CURRENT APPLICATION NUMBER: US/09/941,314
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
NUMBER OF SEQ ID NOS: 19
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 8
LENGTH: 35
TYPE: prt
ORGANISM: Homo sapiens
US-09-941-314-8

```

Query Match	41.3%	Score 119;	DB 9;	Length 35;
Best Local Similarity	100.0%;	Pred. No. 2e-08;		
Matches 23;	Conservative 0;	Mismatches 0;	Indels 0;	Gaps 0

QY	1	KESDDK YHFRIFR VLK VQ RQVTD	23
Db	13	KESDDK YHFRIFR VLK VQ RQVTD	35

RESULT 14
US-08-849-303-19
Sequence 19, Application US/08849303
Publication No. US2003022109A1
GENERAL INFORMATION:
APPLICANT: Atkinson, Howard J.
APPLICANT: McPherson, Michael J.
APPLICANT: Urwin, Peter E.
TITLE OF INVENTION: MODIFIED PROTEINASE INHIBITORS
NUMBER OF SEQUENCES: 79
CORRESPONDENCE ADDRESS:
ADDRESSEE: Klauer & Jackson
STREET: 411 Hackensack Avenue, 4th Floor

CITY: Hackensack
 STATE: New Jersey
 COUNTRY: USA
 ZIP: 07601
 COMPUTER READABLE FORM:
 MEDIUM TYPE: Floppy disk
 COMPUTER: IBM PC compatible
 OPERATING SYSTEM: PC-DOS/MS-DOS
 SOFTWARE: Patentin Release #1.0, Version #1.30
 CURRENT APPLICATION DATA:
 APPLICATION NUMBER: US/08/849,303
 FILING DATE: 21-MAY-1997
 CLASSIFICATION: 514
 ATTORNEY/AGENT INFORMATION:
 NAME: Jackson Esq., David A.
 REGISTRATION NUMBER: 26,742
 REFERENCE/DOCKET NUMBER: 1321-1-003
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: 201-487-5800
 TELEFAX: 201-343-1684
 TELEEX: 133521
 INFORMATION FOR SEQ ID NO: 19:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 127 amino acids
 TYPE: amino acid
 STRANDEDNESS: single
 TOPOLOGY: linear
 MOLECULE TYPE: protein
 HYPOTHETICAL: NO
 J5-08-849-303-19

Query Match	36.8%	Score 106	DB 8	length 127
Best Local Similarity	43.8%	Pred. No.	4.5e-06	
Matches	21	Mismatches	14	Indels 2
				Gaps 1

```

Qy      1 KESDDKYHFRIPRVLVKQROVTHLEHYLNVEMQWTTCCQKPE--TNC 46
         |||::|::|::|::|::|::|::|::|::|::|::|::|::|::|
Db      43 KGSNDAYHSRALQVVRARKQLVAGINYYLDVEMGRITCTKSQTLNLTNC 90

```

```

1      RESULT 15
2      US-09-864-761-3482
3      ; Sequence 3482; Application US/09864761
4      Patent No. US20020048763A1
5      GENERAL INFORMATION:
6      APPLICANT: Penn, Sharon G.
7      APPLICANT: Rank, David R.
8      APPLICANT: Hanzel, David K.
9      APPLICANT: Chen, Wensheng
10     TITLE OR INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL FOR
11     TITLE OF INVENTION: GENE EXPRESSION ANALYSIS BY MICROARRAY
12     FILE REFERENCE: Aeomica-X-1
13     CURRENT APPLICATION NUMBER: US/09/864,761
14     CURRENT FILING DATE: 2001-05-23
15     PRIOR APPLICATION NUMBER: US 60/180,312
16     PRIOR FILING DATE: 2000-02-04
17     PRIOR APPLICATION NUMBER: US 60/207,456
18     PRIOR FILING DATE: 2000-05-26
19     PRIOR APPLICATION NUMBER: US 09/632,366
20     PRIOR FILING DATE: 2000-08-03
21     PRIOR APPLICATION NUMBER: GB 24263.6
22     PRIOR FILING DATE: 2000-10-04
23     PRIOR APPLICATION NUMBER: US 60/236,359
24     PRIOR FILING DATE: 2000-09-27
25     PRIOR APPLICATION NUMBER: PCT/US01/00666
26     PRIOR FILING DATE: 2001-01-30
27     PRIOR APPLICATION NUMBER: PCT/US01/00667
28     PRIOR FILING DATE: 2001-01-30
29     PRIOR APPLICATION NUMBER: PCT/US01/00664
30     PRIOR FILING DATE: 2001-01-30
31     PRIOR APPLICATION NUMBER: PCT/US01/00669
32     PRIOR FILING DATE: 2001-01-30
33     PRIOR APPLICATION NUMBER: PCT/US01/00665

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PRIORITY FILING DATE: 2001-01-30
PRIOR APPLICATION NUMBER: PCT/US01/00668
PRIOR FILING DATE: 2001-01-30
PRIOR APPLICATION NUMBER: PCT/US01/00663
PRIOR FILING DATE: 2001-01-30
PRIOR APPLICATION NUMBER: PCT/US01/00662
PRIOR FILING DATE: 2001-01-30
PRIOR APPLICATION NUMBER: PCT/US01/00661
PRIOR FILING DATE: 2001-01-30
PRIOR APPLICATION NUMBER: PCT/US01/00670
PRIOR FILING DATE: 2001-01-30
PRIOR APPLICATION NUMBER: US 60/234,687
PRIOR FILING DATE: 2000-09-21
PRIOR APPLICATION NUMBER: US 09/608,408
PRIOR FILING DATE: 2000-06-30
PRIOR APPLICATION NUMBER: US 09/774,203
PRIOR FILING DATE: 2001-01-29
NUMBER OF SEQ ID NOS: 49117
SOFTWARE: Anomax Sequence Listing Engine vers. 1.1
SEQ ID NO 34822
LENGTH: 50
TYPE: PRN
ORGANISM: Homo sapiens
FEATURE:
OTHER INFORMATION: MAP TO AL109954.10
OTHER INFORMATION: EXPRESSED IN BONE MARROW, SIGNAL = 1.5
OTHER INFORMATION: EXPRESSED IN LUNG, SIGNAL = 1.5
OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 1.8
OTHER INFORMATION: EXPRESSED IN PLACENTA, SIGNAL = 1.7
OTHER INFORMATION: EXPRESSED IN ADULT LIVER, SIGNAL = 1.6
OTHER INFORMATION: EXPRESSED IN FETAL LIVER, SIGNAL = 1.3
OTHER INFORMATION: EXPRESSED IN BT474, SIGNAL = 1.1
OTHER INFORMATION: EXPRESSED IN HEART, SIGNAL = 1.5
OTHER INFORMATION: EXPRESSED IN HBL10, SIGNAL = 1.3
OTHER INFORMATION: EXPRESSED IN HELLO, SIGNAL = 1.2
OTHER INFORMATION: EST HUMAN HIT: A1200857.1, EVALUATE 5.00e-23
OTHER INFORMATION: SWISSPROT HIT: O60676, EVALUATE 1.00e-01
US-09-864-761-34822

```

Query Match	36.1%	Score 104	DB 9	Length 50
Best Local Similarity	100.0%	Pred. No. 2,8e-06		
Matches	20	Conservative	0	Mismatches 0
				Indels 0
				Gaps 0
Qy	1	KESDDKTHFRIFRVATKQVQ	20	
Db	31	KESDDKTHFRIFRVATKQVQ	50	

Search completed: March 23, 2004, 17:17:52
Job time : 29.0669 secs

GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.

OM protein - protein search, using sw model

Run on: March 23, 2004, 17:06:09 ; Search time 9.57322 Seconds

(without alignments)
522.495 Million cell updates/sec

Title: US-09-941-314-14

Perfect score: 288

Sequence: 1 KESDDKXHFRIPLVKVQRO.....MOWTCKPRTTNCVPOERE 52

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 283366 seqs, 96191526 residues

Total number of hits satisfying chosen parameters: 283366

Minimum DB seq length: 0

Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Database :

1: PIR 78: *
2: PIR1: *
3: PIR3: *
4: PIR4: *

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	131	45.5	139	2	A45361
2	106	36.8	120	2	S10587
3	106	36.8	127	2	S07085
4	96	33.3	146	1	UDHU
5	93	32.3	140	2	A36163
6	92	31.9	112	1	UDBO
7	88	30.6	139	1	UDCH
8	83.5	29.0	111	2	A28793
9	82	28.5	141	2	B29632
10	76.5	26.6	162	2	A43428
11	75	26.4	133	2	JC4536
12	75	26.0	142	2	A47142
13	71	24.7	141	1	UDH02
14	69	24.0	141	1	UDH01
15	65	22.6	111	1	JC2040
16	65	22.6	132	2	JC4918
17	65	22.6	132	2	JC1871
18	64	22.2	915	1	RDBRHH
19	63	21.9	438	2	T52149
20	63	21.9	438	2	T52149
21	60	20.8	257	2	T03724
22	59.5	20.7	325	2	F69784
23	59.5	20.7	325	2	F69784
24	59.5	20.5	139	2	B64005
25	59	20.5	141	2	UQ1470
26	58.5	20.3	4540	2	T30838
27	58.5	20.3	4540	2	T30838
28	58	20.1	436	1	KGBOL1
29	58	20.1	436	1	KGBOL1

30	58	20.1	448	2	JN0118	glucan 1,3-beta-gl
31	58	20.1	621	1	KGBOL1	kininogen, HMW I p
32	57.5	20.0	1585	2	T19121	probable protein-t
33	57.5	19.8	434	1	KGBOL2	kininogen, LMW II
34	57	19.8	617	2	S19254	nitrate reductase
35	57	19.8	619	1	KGBOL2	kininogen, HMW II
36	56	19.4	588	2	C95252	L-fucose isomerase
37	56	19.4	588	2	A99717	L-fucose isomerase
38	56	19.4	904	1	RDNTT	nitrate reductase
39	56	19.4	904	1	RDNTT	nitrate reductase
40	55.5	19.3	164	2	T31026	hypothetical prote
41	55.5	19.3	602	2	S69198	prostaglandin G/H
42	55.5	19.3	602	2	S39782	cyclooxygenase 1 -
43	55.5	19.3	602	2	A35564	prostaglandin-endo
44	55	19.1	288	2	T04401	endonuclease (EC 3
45	55	19.1	427	1	KGHUL1	kininogen, LMW pre

ALIGNMENTS

RESULT 1

A45361

Cystatin-related epididymal specific protein - mouse (fragment)

C:Species: Mus musculus (house mouse)

C:Date: 10-Jun-1993 #sequence_revision 18-Nov-1994 #text_change 05-Nov-1999

C:Accession: A45361

R:Corwall, G.A.; Orgebin-Crist, M.C.; Hann, S.R.

Mol. Endocrinol. 6, 1653-1664, 1992

A:Title: The CRIS gene: a unique testis-regulated gene related to the cystatin family is

A:Reference number: A45361; MUID:93078799; PMID:1280328

A:Accession: A45361

A:Status: preliminary; not compared with conceptual translation

A:Molecule type: nucleic acid

A:Residues: 1-139 <COR>

A:Cross-reference: GB:549926; NID:9260492; PIDN:AA35390.1; PID:9260493

A:Note: sequence extracted from NCBI backbone (NCBIP:118813)

C:Superfamily: cystatin; cystatin homology

F:28-139/Domain: cystatin homology <CYS>

Query Match 45.5%; Score 131; DB 2; Length 139;

Best Local Similarity 41.5%; Pred. No. 2.6e-09;

Matches 22; Conservative 16; Mismatches 13; Indels 2; Gaps 1;

RESULT 2

S10587

Cystatin C - rat

C:Species: Rattus sp. (rat)

C:Date: 21-Nov-1993 #sequence_revision 03-Nov-1995 #text_change 16-Jul-1999

C:Accession: S10587

R:Bernard, F.; Bernard, A.; Paucher, D.; Capony, J.P.; Derancourt, J.; Billard, M.; Gauch

Biol. Chem. Hoppe-Seyler 371 (Suppl.), 161-166, 1990

A:Title: Rat cystatin C: the complete amino acid sequence reveals a site for N-glycosylat

A:Reference number: S10587; MUID:90380276; PMID:2400577

A:Accession: S10587

A:Status: preliminary

A:Molecule type: protein

A:Residues: 1-120 <ESN>

A:Note: 43-Asn was also found

A:Note: the sequence from Fig. 2 is inconsistent with that from Fig. 1 in having 18-Ala

C:Superfamily: cystatin; cystatin homology

F:9-120/Domain: cystatin homology <CYS>

Query Match 36.8%; Score 106; DB 2; Length 120;

Best Local Similarity 43.8%; Pred. No. 3.2e-06;

Matches 21; Conservative 11; Mismatches 14; Indels 2; Gaps 1;

Oy 1 KESDDKXHFRIPLVKVQROVTDHLEYNVENQWTCQKPE--ETTCVPOER 51

Db 55 KESDDKXHFRIPLVKVQROVTDHLEYNVENQWTCQKPE--ETTCVPOER 107

Db 36 KGSNDAYHSRAIQVRAKQVLAVGINYYLDVEMGRITCTKSQTNLTNC 83

RESULT 3

S07085

Cystatin C precursor - rat (fragment)

C/Species: Rattus norvegicus (Norway rat)

C/Date: 01-Dec-1993 #sequence revision 03-Aug-1995 #text change 16-Jul-1999

C/Accession: S07085; S01337; S21109

R/Colo: T. J. Dickson, P.W., Esmard, F.; Averill, S.; Rabridger, G.P.; Gauthier, F.; Sch

Eur. J. Biochem. 186, 35-42, 1989

A/Title: The cDNA structure and expression analysis of the genes for the cysteine protei

A/Reference number: S07085; MUID:90092122; PMID:2689174

A/Accession: S07085

A/Status: preliminary

A/Molecule type: mRNA

A/Residues: 1-127 <COL>

A/Cross-references: EMBL:X16957; NID:956041; PIDN:CAA34831.1; PID:9736290

R/Esmard, A.; Esmard, F.; Faucher, D.; Gauthier, F.

FEBS Lett. 236, 475-478, 1988

A/Title: Two rat homologues of human cystatin C.

A/Reference number: S01337; MUID:88313020; PMID:3044831

A/Accession: S01337

A/Molecule type: protein

A/Residues: 8-49 <ESN>

R/Esmard, A.; Esmard, F.; Gullou, F.; Gauthier, F.

FEBS Lett. 300, 131-135, 1992

A/Title: Production of the cysteine proteinase inhibitor cystatin C by rat Sertoli cells

A/Reference number: S21109; MUID:92252121; PMID:1563513

A/Accession: S21109

A/Molecule type: protein

A/Residues: 8 'XX' 11-20 <ES2>

C/Superfamily: cystatin; cystatin homology

C/Keyword: cysteine proteinase inhibitor

F/16-127/Domain: cystatin homology <CTS>

F/80-90,104-124/Disulfide bonds: #status predicted

Query Match 36.8%; Score 106; DB 2; Length 127;
Best Local Similarity 43.8%; Pred. No. 3.4e-06;

Matches 21; Conservative 11; Mismatches 14; Indels 2; Gaps 1;

QY 1 KESDDKXHFRIFRVLKVGQVTDHLEHYLNMQMTTCQKEET--TNC 46
Db 43 KGSNDAYHSRAIQVRAKQVLAVGINYYLDVEMGRITCTKSQTNLTNC 90

RESULT 4

UDHU

Cystatin C precursor [validated] - human

N/Alternate names: gamma-CSF; gamma-trace; neuroendocrine basic polypeptide; post-gamma

C/Species: Homo sapiens (man)

C/Date: 06-Jul-1982 #sequence revision 31-Mar-1991 #text change 08-Dec-2000

C/Accession: S10216; S00004; J00095; A33400; S02751; A01270; A25434; S12288; A32732; A60

R/Abrahamson, M.; Olafsson, I.; Palsdottir, A.; Ulfarsbeck, M.; Lundwall, A.; Jensen, O.

Biochem. J. 268, 287-294, 1990

A/Title: Structure and expression of the human cystatin C gene.

A/Reference number: S10216; MUID:90303202; PMID:2363674

A/Accession: S10216

A/Molecule type: DNA

A/Residues: 1-146 <AB1>

A/Cross-references: EMBL:X52255; NID:930257; PIDN:CAA34497.1; PID:9296643

R/Abrahamson, M.; Grubb, A.; Olafsson, I.; Lundwall, A.

FEBS Lett. 216, 229-233, 1987

A/Title: Molecular cloning and sequence analysis of cDNA coding for the precursor of the

A/Reference number: S00004; MUID:87219149; PMID:3455457

A/Accession: S00004

A/Molecule type: mRNA

A/Residues: 1-146 <AB2>

A/Cross-references: EMBL:X05607; NID:930371; PIDN:CAA29096.1; PID:9755738

R/Levy, E.; Lopez-Otin, C.; Ghiso, J.; Gellner, D.; Frangione, B.

J. Exp. Med. 169, 1771-1778, 1989

A/Title: Stroke in Icelandic patients with hereditary amyloid angiopathy is related to a

A/Reference number: J00095; MUID:89235594; PMID:2541223

A/Accession: J00095

A/Molecule type: DNA

A/Residues: 1-146 <LEV>

A/Cross-references: GB:X61881; NID:930367; PIDN:CAA43856.2; PID:94490944

A/Note: the cystatin C gene isolated from the brain of an Icelandic patient with heredita

e)

R/Satch, E.; Sabatini, L.M.; Eddy, R.L.; Shows, T.B.; Azen, E.A.; Isemura, S.; Sanada, Y

Biochem. Biophys. Res. Commun. 162, 1324-1331, 1989

A/Title: The human cystatin C gene (CST3) is a member of the cystatin gene family which

A/Reference number: A33400; MUID:89350949; PMID:2764935

A/Accession: A33400

A/Molecule type: protein

A/Residues: 1-24, 'T', 26-146 <SA1>

A/Cross-references: GB:M27889; GB:M27890; GB:M27891; NID:9181385; PIDN:AAA52164.1; PID:93

R/Ghiso, J.; Cowan, N.; Frangione, B.

Biol. Chem. Hoppe-Seyler 369, 205-208, 1988

A/Title: Isolation of a sequence encoding human cystatin C. Conservation of exon-intron

A/Reference number: S02751; MUID:89076507; PMID:3264504

A/Accession: S02751

A/Molecule type: DNA

A/Residues: 82-119 <GH2>

A/Cross-references: EMBL:M27769

A/Note: the authors translated the codon ACC for residue 105 as Thr; the sequence shown i

R/Grubb, A.; Lofberg, H.

Proc. Natl. Acad. Sci. U.S.A. 79, 3024-3027, 1982

A/Title: Human gamma-trace, a basic microprotein: amino acid sequence and presence in the

A/Reference number: A01270; MUID:82222268; PMID:6283552

A/Accession: A01270

A/Molecule type: protein

A/Residues: 27-131, 'S', 133-146 <GRU>

R/Ghiso, J.; Jensen, O.; Frangione, B.

Proc. Natl. Acad. Sci. U.S.A. 83, 2974-2978, 1986

A/Title: Amyloid fibrils in hereditary cerebral hemorrhage with amyloidosis of Iceland ty

A/Reference number: A25434; MUID:86206076; PMID:3517880

A/Accession: A25434

A/Molecule type: protein

A/Residues: 37-93, 'Q', 95-146 <GH1>

R/Turk, V.; Brzin, J.; Longer, M.; Ritonja, A.; Eropkin, M.; Borchart, U.; Machleidt, W.

Hope-Seyler's Z. Physiol. Chem. 364, 1487-1496, 1983

A/Title: Protein inhibitors of cysteine proteinases. III. Amino-acid sequence of cystatir

A/Reference number: S01461; MUID:84110059; PMID:6662498

A/Accession: S12288

A/Molecule type: protein

A/Residues: 27-73 <TUR>

R/Brzin, J.; Popovic, T.; Turk, V.

Biochem. Biophys. Res. Commun. 118, 103-109, 1984

A/Title: Human cystatin, a new protein inhibitor of cysteine proteinases.

A/Reference number: A32732; MUID:8418015; PMID:6365094

A/Accession: A32732

A/Molecule type: protein

A/Residues: 27-76 <BR2>

R/Olafsson, I.; Gudmundsson, G.; Abrahamson, M.; Jensen, O.; Grubb, A.

Scand. J. Clin. Lab. Invest. 50, 85-93, 1990

A/Title: The amino terminal portion of cerebrospinal fluid cystatin C in hereditary cyste

A/Reference number: A60552; MUID:90193615; PMID:2315647

A/Accession: A60552

A/Molecule type: protein

A/Residues: 27-49, 'XX', 52-64 <OLA>

A/Note: this protein, purified from cerebrospinal fluid of patients with the autosomal de

e defective gene is not present in CSF but is found instead in amyloid deposits

R/Popovic, T.; Brzin, J.; Ritonja, A.; Turk, V.

Biol. Chem. Hoppe-Seyler 371, 575-580, 1990

A/Title: Different forms of human cystatin C.

A/Reference number: S10607; MUID:91025625; PMID:2222856

A/Accession: S10607

A/Molecule type: protein

A/Residues: 27-53 <POP>

A/Experimental source: urine, kidney disease

A/Note: truncated forms with amino ends at positions 35 and 36 of the precursor were also

R/Grubb, A.; Lofberg, H.; Barrett, A.J.

FEBS Lett. 170, 370-374, 1984

A/Title: The disulphide bridges of human cystatin C (gamma-trace) and chicken cystatin.

A:Reference number: S01462
 A:Contents: annotation; disulfide bonds
 R:Berli, P.J.; Storer, A.C.
 Biochem. J. 302, 411-416, 1994
 A:Title: Local pH-dependent conformational changes leading to proteolytic susceptibility
 A:Reference number: S55305; MUID:94379969; PMID:8092991
 A:Accession: S55305
 A:Status: preliminary
 A:Molecule type: protein
 A:Residues: 27-49;106-146 <BER>
 C:Comment: This protein is found in the post-gamma-globulin fraction of cerebrospinal fluid patients with certain autoimmune diseases.
 C:Comment: This protein is an inhibitor of cysteine proteinases and may serve an important function in the regulation of the immune response.
 C:Comment: A mutant cystatin C, with 94-Gln, is deposited in hereditary cerebral hemorrhage of Japanese descent.
 C:Gene: GDB:CST3
 A:Cross-references: GDB:119817; OMIM:105150
 A:Map position: 20p11.2-20p11.2
 A:Introns: 81/3; 119/3
 C:Superfamily: cystatin; cystatin homology
 C:Keywords: amyloid; cysteine proteinase inhibitor; extracellular protein; hydroxyproline
 F:1-26/Domain: signal sequence #status predicted <SIG>
 F:27-146/Product: cystatin C #status experimental <MAT>
 F:35-146/Domain: cystatin homology <CYS>
 F:81-85/Region: inhibitory #status predicted
 F:29/Modified site: hydroxyproline (Pro). (partial) #status experimental
 F:99-109;123-143/Disulfide bonds: #status experimental

Query Match 33.3%; Score 96; DB 1; Length 146;
 Best Local Similarity 39.6%; Pred. No. 7.2e-05;
 Matches 19; Conservative 10; Mismatches 17; Indels 2; Gaps 1;

Db 1 KESDDKHFRIFFVLKQROVTDHLEHNLVEMQWTCQK-PETTC 46
 62 KASNDVHSPALQVVRARQIVAGVNYFLDVELEKRTCTKTOPYLDNC 109

RESULT 5
 A36163
 Cystatin C precursor - mouse
 C:Species: Mus musculus (house mouse)
 C:Date: 14-Dec-1990 #sequence_revision 14-Dec-1990 #text_change 16-Jul-1999
 C:Accession: A36163
 R:Solom, M.; Rawson, C.; Lindburg, K.; Barnes, D.
 Biochem. Biophys. Res. Commun. 172, 945-951, 1990
 A:Title: Transforming growth factor beta regulates cystatin C in serum-free mouse embryo
 A:Reference number: A36163; MUID:91054522; PMID:2241983
 A:Accession: A36163
 A:Status: preliminary
 A:Molecule type: mRNA
 A:Residues: 1-140 <SOL>
 A:Cross-references: EMBL:M59470; NID:G192911; PID:AAA63298.1; PID:G192912
 C:Superfamily: cystatin; cystatin homology
 F:29-140/Domain: cystatin homology <CYS>
 F:93-103;117-137/Disulfide bonds: #status predicted

Query Match 32.3%; Score 93; DB 2; Length 140;
 Best Local Similarity 39.6%; Pred. No. 0.00011;
 Matches 19; Conservative 11; Mismatches 16; Indels 2; Gaps 1;

Db 1 KESDDKHFRIFFVLKQROVTDHLEHNLVEMQWTCQK-PETTC 46
 56 KGSNDVHSPALQVVRARQIVAGVNYFLDVELEKRTCTKTOPYLDNC 103

RESULT 6
 UNDO
 Cystatin - bovine
 N:Alternate names: thiol proteinase inhibitor
 C:Species: Bos primigenius laurus (cattle)
 C:Date: 28-Feb-1986 #sequence_revision 28-Feb-1986 #text_change 06-Dec-1996
 C:Accession: A01271
 R:Hirado, M.; Tsunawake, S.; Sakiyama, F.; Nishibe, M.; Fujii, S.

FEBS Lett. 186, 41-45, 1985
 A:Title: Complete amino acid sequence of bovine colostrum low-M-r cysteine proteinase inhibitor
 A:Reference number: A01271; MUID:85231205; PMID:3891407
 A:Accession: A01271
 A:Molecule type: protein
 A:Residues: 1-112 <HR>
 C:Superfamily: cystatin; cystatin homology
 C:Keywords: colostrum; cysteine proteinase inhibitor
 F:2-112/Domain: cystatin homology <CYS>
 F:48-52/Region: inhibitory #status predicted
 F:66-76;90-110/Disulfide bonds: #status predicted

Query Match 31.9%; Score 92; DB 1; Length 112;
 Best Local Similarity 40.5%; Pred. No. 0.00017;
 Matches 17; Conservative 10; Mismatches 15; Indels 0; Gaps 0;

Db 1 KESDDKHFRIFFVLKQROVTDHLEHNLVEMQWTCQK-PETTC 42
 29 KGSNDVHSPALQVVRARQIVAGVNYFLDVELEKRTCTKTOPYLDNC 109

RESULT 7
 UNDO
 Cystatin precursor - chicken
 N:Alternate names: cystatin I; cysteine proteinase inhibitor; egg-white cystatin
 C:Species: Gallus gallus (chicken)
 C:Date: 03-Aug-1984 #sequence_revision 12-Apr-1996 #text_change 29-Oct-1999
 C:Accession: A34456; MUID:84178305; PMID:6712597
 R:Colletta, R.; Sakaguchi, Y.; Nagase, H.; Bird, J.W.C.
 J. Biol. Chem. 264, 17164-17169, 1989
 A:Title: Chicken egg white cystatin. Molecular cloning, nucleotide sequence, and tissue distribution
 A:Reference number: A34456; MUID:90008873; PMID:2793849
 A:Accession: A34456
 A:Molecule type: mRNA
 A:Residues: 1-139 <COL>
 A:Cross-references: GB:J05077; NID:G211714; PID:AAA6744.1; PID:G211715
 R:Schwabe, C.; Anastasi, A.; Crow, H.; McDonald, J.K.; Barrett, A.J.
 Biochem. J. 217, 813-817, 1984
 A:Title: Cystatin. Amino acid sequence and possible secondary structure.
 A:Reference number: A01274; MUID:84178305; PMID:6712597
 A:Accession: A01274
 A:Molecule type: protein
 A:Residues: 24-139 <SCH>
 R:Turk, V.; Brzin, J.; Longer, M.; Ritonja, A.; Eropkin, M.; Borchart, U.; Machleidt, W.
 Hoppe-Seyler's Z. Physiol. Chem. 364, 1487-1496, 1983
 A:Title: Protein inhibitors of cysteine proteinases. III. Amino acid sequence of cystatin
 A:Reference number: S01461; MUID:84110059; PMID:6662498
 A:Accession: S01461
 A:Molecule type: protein
 A:Residues: 24-139 <TUR>
 R:Anastasi, A.; Brown, M.A.; Kembhavi, A.A.; Nicklin, M.J.H.; Sayers, C.A.; Sunter, D.C.,
 Biochem. J. 211, 129-138, 1983
 A:Title: Cystatin, a protein inhibitor of cysteine proteinases. Improved purification for
 A:Reference number: A37514; MUID:83256421; PMID:6409085
 A:Contents: annotation; characterization of protein
 R:Grubb, A.; Lofberg, H.; Barrett, A.J.
 FEBS Lett. 170, 370-374, 1984
 A:Title: The disulfide bridges of human cystatin C (gamma-trace) and chicken cystatin.
 A:Reference number: S01462
 A:Contents: annotation; disulfide bonds
 R:Anastasi, A.; Naegler, D.K.; Schulze, A.J.; Engh, R.A.; Genenger, G.; Machleidt, W.,
 Eur. J. Biochem. 224, 407-415, 1994
 A:Title: Production, inhibitory activity, folding and conformational analysis of an N-term
 A:Reference number: S48159; MUID:95010016; PMID:7925354
 A:Accession: S48159
 A:Status: preliminary
 A:Molecule type: protein
 A:Residues: 24-139 <AUE>
 R:Labat, B.; Krieglstein, K.; Henschen, A.; Kos, J.; Turk, V.; Huber, R.; Bode, W.
 FEBS Lett. 248, 162-168, 1989
 A:Title: The cysteine proteinase inhibitor chicken cystatin is a phosphoprotein.
 A:Reference number: S04008; MUID:89252033; PMID:2721673
 A:Accession: S04008

A/Molecule type: protein
 A/Residues: 97-114 <LAB>
 R/Collection: R.; Bird, J.W.C.
 Gene 130, 175-181, 1993
 A/Title: Isolation and characterization of the chicken cystatin-encoding gene: Mapping
 A/Reference number: JN0789; MUID:93366172; PMID:8359684
 A/Accession: JN0789
 A/Molecule type: DNA
 A/Residues: 1-139 <CO2>
 A/Cross-references: GB:M95725
 A/Note: authors failed to translate the codon for residue 115-Tyr
 C/Comment: This protein binds tightly to and inhibits a variety of cysteine proteinases
 C/Genetics:
 A/Gene: Can
 A/Introns: 76/3; 114/3
 C/Superfamily: cystatin; cystatin homology
 C/Keywords: cysteine proteinase inhibitor; egg white; phosphoprotein
 F/1-23/Domain: signal sequence #status predicted <SIG>
 F/24-139/Product: cystatin, long form #status experimental <CYLP>
 F/30-139/Domain: cystatin homology <CYS>
 F/32-139/Product: cystatin, short form #status experimental <CYSP>
 F/76-80/Region: inhibitory #status predicted
 F/94-104,118-138/Diethylidide bonds: #status experimental
 F/103/Binding site: phosphate (Ser) (covalent) (partial) #status experimental

Query Match 30.6%; Score 88; DB 1; Length 139;
 Best Local Similarity 42.5%; Pred. No. 0.00071;
 Matches 17; Conservative 9; Mismatches 14; Indels 0; Gaps 0;

QY 1 KESDDKXHFRIFFVLKVRQVTDHLEHNLVEMQWTTCK 40
 Db 57 RASNDKYSRVRVISAQRLVSGIKYILQVEIGRTTCPK 96

RESULT 8
 A28793
 cystatin - puff adder
 C/Species: Bltis arietans (puff adder)
 C/Date: 15-Dec-1988 #sequence_revision 15-Dec-1988 #text_change 30-Sep-1993
 C/Accession: A28793
 R/Rittonja, A.; Evans, H.J.; Machleidt, W.; Barrett, A.J.
 Biochem. J. 246, 799-802, 1987
 A/Title: Amino acid sequence of a cystatin from venom of the African puff adder (Bltis a
 A/Reference number: A28793; MUID:88076861; PMID:3500714
 A/Accession: A28793
 A/Molecule type: protein
 A/Residues: 1-111 <RT>
 C/Superfamily: cystatin; cystatin homology

Query Match 29.0%; Score 83.5; DB 2; Length 111;
 Best Local Similarity 33.9%; Pred. No. 0.0021;
 Matches 20; Conservative 13; Mismatches 17; Indels 9; Gaps 2;

QY 3 SDDKXHFRIFFVLKVRQVTDHLEHNLVEMQWTTCK-----PDTNC-VPORE 52
 Db 30 SKNDYKERRVVAQGVVGVYLMELTKTKTKVRKGYQEIQCNLPENQ 88

RESULT 9
 B29632
 cystatin SA precursor - human
 C/Species: Homo sapiens (man)
 C/Date: 31-Mar-1989 #sequence_revision 30-Jun-1989 #text_change 16-Jul-1999
 C/Accession: B29632; S02490; A11422; B27015
 R/Saitoh, E.; Kim, H.S.; Smithies, O.; Maeda, N.
 Gene 61, 329-338, 1987
 A/Title: Human cysteine-proteinase inhibitors: nucleotide sequence analysis of three men
 A/Reference number: A91589; MUID:8818836; PMID:3446578
 A/Accession: B29632
 A/Molecule type: DNA
 A/Residues: 1-141 <SAI>
 A/Cross-references: GB:M19673; GB:M19170; NID:g186403; PIDN:AAA6116.1; PID:g386826
 A/Note: the authors translated the codon GAC for residue 129 as Asn

R/Saitoh, E.; Isemura, S.; Sanada, K.; Kim, H.S.; Smithies, O.; Maeda, N.
 Biol. Chem. Hoppe-Seyler 369, 191-197, 1988
 A/Title: Cystatin superfamily. Evidence that family II cystatin genes are evolutionarily
 A/Reference number: S02489; MUID:89076505; PMID:3202964
 A/Accession: S02490
 A/Status: not compared with conceptual translation
 A/Molecule type: DNA
 A/Residues: 21-141 <SA2>
 R/Isemura, S.; Saitoh, E.; Sanada, K.
 J. Biochem. 102, 693-704, 1987
 A/Title: Characterization and amino acid sequence of a new acidic cysteine proteinase int
 A/Reference number: A41422; MUID:8819220; PMID:3436950
 A/Accession: A41422
 A/Molecule type: protein
 A/Residues: 25-141 <ISB>
 R/Isemura, S.; Saitoh, E.; Sanada, K.; Ito, S.
 In Cysteine Proteinases and Their Inhibitors, Turk, V., ed., pp.497-505, Walter de Gruytc
 A/Title: Cystatin S and the related cysteine proteinase inhibitors in human saliva.
 A/Reference number: A27015
 A/Accession: B27015
 A/Molecule type: protein
 A/Residues: 25-134, 'D', 136-141 <IS2>
 C/Genetics:
 A/Gene: GDB:CST2
 A/Cross-references: GDB:119816; OMIM:123856
 A/Map position: 20p11.2-20p11.2
 C/Superfamily: cystatin; cystatin homology
 F/30-141/Domain: cystatin homology <CYS>

Query Match 28.5%; Score 82; DB 2; Length 141;
 Best Local Similarity 30.2%; Pred. No. 0.0041;
 Matches 16; Conservative 13; Mismatches 22; Indels 2; Gaps 1;

QY 1 KESDDKXHFRIFFVLKVRQVTDHLEHNLVEMQWTTCK--PDTNCVPOER 51
 Db 57 KATEDYRRLRLVLRARQIVGVNFFDIEVGRITCTKSQPNLDTCAPEHQ 109

RESULT 10
 A43428
 onchocystatin - nematode (Onchocerca volvulus)
 N/Alternate names: cysteine proteinase inhibitor; onchocerciasis antigen
 C/Species: Onchocerca volvulus
 C/Date: 04-Mar-1993 #sequence_revision 18-Nov-1994 #text_change 17-Mar-2000
 C/Accession: A43428; B43927
 R/Justigman, S.; Brotman, B.; Hulma, T.; Prince, A.M.; McKerrow, J.H.
 J. Biol. Chem. 267, 17339-17346, 1992
 A/Title: Molecular cloning and characterization of onchocystatin, a cysteine proteinase
 A/Reference number: A43428; MUID:92381053; PMID:1512269
 A/Accession: A43428
 A/Status: preliminary
 A/Molecule type: mRNA
 A/Residues: 1-162 <LUS>
 A/Cross-references: GB:M37105; NID:g159905; PID:g159906
 A/Note: sequence extracted from NCBI backbone (NCBI:111962, NCBI:P.111963)
 R/Chandrahekar, R.; Masood, K.; Alvarez, R.M.; Ogunitade, A.F.; Lujan, R.; Richards Jr
 J. Clin. Invest. 88, 1460-1466, 1991
 A/Title: Molecular cloning and characterization of recombinant parasite antigens for imm
 A/Reference number: A43927; MUID:92042729; PMID:1840605
 A/Accession: B43927
 A/Molecule type: mRNA
 A/Residues: 'P', 37-57, 'A', 59-71, 'R', 73-83, 'N', 85-126, 'M', 128-162 <CHA>
 A/Cross-references: GB:M60279; NID:g159888
 A/Experimental source: clone OC 9.3
 A/Note: sequence extracted from NCBI backbone (NCBI:65111, NCBI:P.65113)
 C/Superfamily: cystatin; cystatin homology
 C/Keywords: cysteine proteinase inhibitor

Query Match 26.6%; Score 76.5; DB 2; Length 162;
 Best Local Similarity 29.4%; Pred. No. 0.024;
 Matches 15; Conservative 15; Mismatches 16; Indels 5; Gaps 1;

QY 1 KESDDKXHFRIFFVLKVRQVTDHLEHNLVEMQWTTCK-----QKPTTNC 46

Db
78 EQSNDSEYHLMPIKLLKVSSQVAVGVKKYKMDYQVARSQCKKSSNEKVDLTKC 128

RESULT 11

cystatatin precursor - horseshoe crab (*Trachyleptus tridentatus*)
 N:Alternate names: cystatin L; cysteine proteinase inhibitor
 C/Species: *Trachyleptus tridentatus*
 C/Date: 15-Feb-1996 #sequence_revision 19-Apr-1996 #text_change 03-Dec-1999
 C/Accession: J04536; PC4122
 J:Author(s): K.L.; Kanabata, S.; Hirata, M.; Miyagi, M.; Tsunasawa, S.; Iwanaga, S.
 J: Biochem. 119, 85-94, 1996
 A>Title: A cysteine proteinase inhibitor scored in the large granules of horseshoe crab hemocytes
 A/Accession number: J04536; MUID:97063312; PMID:8907180
 A/Molecule type: mRNA
 A/Residues: 1-133 <AGA>
 A/Accession: PC4122
 A/Molecule type: protein
 A/Residues: 26-57/60-105/107-113/115-128 <AG2>
 A/Experimental source: hemocytes
 C/Comment: This protein belongs to the cystatin family and it is a single-chain protein
 tively against Gram-negative bacteria, defense against invading microbes, and response to
 C/Superfamily: cystatin; cystatin homolog
 C/Keywords: cysteine proteinase inhibitor; hemolymph; pyroglutamic acid
 F/1-19/Domain: signal sequence #status predicted <SIG>
 F/20-133/Product: limulus-cystatin #status predicted <MAT>
 F/21-132/Domain: cystatin homolog <CYS>
 F/20/Modified site: pyrrolidone carboxylic acid (Gln) (in mature form) #status predicted
 F/85-96,109-129/Dissulfide Bonds: #status predicted

Query Match	26.4%	Score	76	DB	2	Length	133
Best Local Similarity	33.3%	Pred. No.	0.032				
Matches	16	Conservative	10	Mismatches	18	Indels	4
						Gaps	1

QY 3 SDDKYHFRIFRYALKVQRÖVTDLHEHLNVMQMWTCCRPETTNCVPQE 50
 | : | : : | : | : | : | : | : | : | : | : | : | : | : |
Db 50 SNSLYHHKLKIKHKARTQVVSGINAEVFIBTGTTCCKSE----VPLE 93

RESULT 12

Cystatin D precursor - human
C:Species: Homo sapiens (man)
C>Date: 03-May-1994 #sequence_revision 03-May-1994 #text_change 16-Jul-1999
C/Accession: A47142, S18212
R:Fejtle, J.P.; Balbin, M.; Abramson, M.; Velasco, G.; Dalboge, H.; Grubb, A.; Lopez-C
J. Biol. Chem. 266, 15737-15744, 1993
A>Title: Human Cystatin D, cDNA cloning, characterization of the *Escherichia coli* expres
A/Reference number: A47142, MUID:93340179, PMID:8340398
A/Accession: A47142
A>Status: preliminary
A:Molecule type: mRNA
A:Residues: 1-142 <PRE>
A/Cross-references: GB:X70377, NID:g338710, PID:CAA49638.1, PID:g338711
A/Note: single residue difference between this report and S18218 was investigated and
R:Fejtle, J.P.; Abramson, M.; Olatason, I.; Velasco, G.; Grubb, A.; Lopez-Otin, C.
J. Biol. Chem. 266, 20538-20543, 1991
A>Title: Structure and expression of the gene encoding cystatin D, a novel human cysteine
A/Reference number: S18212, MUID:92041895, PMID:1939105
A/Accession: S18212
A>Status: preliminary
A:Molecule type: DNA
A:Residues: 1-45, 'C', 47-142 <PR2>
A/Cross-references: EMBL:X55964, NID:g30263, PIDN:CAA42590.1, PID:g30264
C/Genetics:
A/Gene: GDB:CST5
A/Cross-references: GDB:136380, OMIM:123858
A/Map position: 20p11.21-20p11.21
A/Introns: 77/3; 115/3
C/Superfamily: cystatin, cystatin homology
C/Keywords: cysteine proteinase inhibitor; extracellular protein; saliva

F;1-20/Domain: signal sequence #status predicted <SIG>
F;30-142/Domain: cystatin homology <CYS>

Query Match	26.0%	Score 75;	DB 2;	Length 142;
Best Local Similarity	34.1%	Pred. No. 0.032;		
Matches 15;	Conservative 9;	Mismatches 18;	Indels 2;	Gaps 1.

QY 5 DKYHFRIRFLKVGROVTDHLIEHLNVEMQWTTCCQ--PETTNC 46
|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|
Db 62 DEYSRPLQMAAYQQIVGVNYYFNVKFGRTTCTKSQPNDNC 105

RESULT 13

Cysteatin SN precursor [validated] - human
 N/Alternate names: cystatin SA-I
 C/Species: Homo sapiens (man)
 C/Date: 28-May-1986 #sequence_revision 08-Feb-1996 #text_change 08-Dec-2000
 A/Accession: A28110; S02489; A29632; A01273; S19279
 R/Al-Hashimi, I.; Dickinson, D.P.; Levine, M.J.
 J. Biol. Chem. 263, 9381-9387, 1988
 A/Title: Purification, molecular cloning, and sequencing of salivary cystatin SA-I.
 A/Reference number: A28110; PMID:86243825; PMID:2837486
 A/Accession: A28110
 A/Molecule type: mRNA
 A/Residues: 1-141 <AAH>
 A/Cross-references: GB:J03870; NID:G337751; PID:AAA60299.1; PID:G337752
 R/Saitoh, E.; Isemura, S.; Sanada, K.; Kim, H.S.; Smitchies, O.; Maeda, N.
 Biol. Chem. Hoppe-Seyler 369, 191-197, 1988
 A/Title: Cystatin superfamily. Evidence that family II cystatin genes are evolutionarily
 A/Reference number: S02489; PMID:89076505; PMID:3202964
 A/Accession: S02489
 A/Status: not compared with conceptual translation
 A/Molecule type: DNA
 A/Residues: 21-141 <SA2>
 R/Saitoh, E.; Kim, H.S.; Smitchies, O.; Maeda, N.
 Gene 61, 329-338, 1987
 A/Title: Human cysteine-proteinase inhibitors: nucleotide sequence analysis of three mem
 A/Reference number: A51589; PMID:88185836; PMID:3446578
 A/Accession: A29632
 A/Molecule type: DNA
 A/Residues: 1-86, 'I', 88-141 <SAI>
 R/Isemura, S.; Saitoh, E.; Sanada, K.
 FEBS Lett. 198, 145-149, 1986
 A/Title: Characterization of a new cysteine proteinase inhibitor of human saliva, cystat
 A/Reference number: A01273; PMID:86164938; PMID:3514272
 A/Accession: A01273
 A/Molecule type: protein
 A/Residues: 29-141 <ISB>
 R/Ramasubbu, N.; Reddy, M.S.; Berger, E.J.; Haraazthy, G.G.; Soni, S.D.; Levine, M.J.
 Biochem. J. 280, 341-352, 1991
 A/Title: Large-scale purification and characterization of the major phosphoproteins and r
 A/Reference number: S19279; PMID:92082469; PMID:1747707
 A/Accession: S19279
 A/Status: preliminary
 A/Molecule type: protein
 A/Residues: 21-55 <RAM>
 C/Comment: Human saliva appears to contain several cysteine proteinase inhibitors that a
 ences. Cystatin SN, with a pI of 7.5, is a much better inhibitor of papain and dipeptid
 C/Genetics:
 A/Gene: GDB:CS71
 A/Cross-references: GDB:119815; OMIM:123855
 A/Map position: 20p11.2-20p11.2
 C/Superfamily: cystatin; cystatin; cystatin homology
 C/Keywords: cysteine proteinase inhibitor; extracellular protein; saliva
 F/1-20/Domain: signal sequence #status predicted <SIG>
 F/21-141/Product: cystatin SA-I #status experimental <MAT1>
 F/29-141/Product: cystatin SN #status experimental <MAT2>
 F/30-141/Domain: cystatin homology <CYS>
 F/76-80/Region: inhibitory #status predicted
 F/94-104, 118-138/Disulfide bonds: #status predicted

Query Match	24.7%	Score 71	DB 1	length 141
-------------	-------	----------	------	------------

Best Local Similarity 32.1%; Pred. No. 0.1; Matches 17; Conservative 9; Mismatches 25; Indels 2; Gaps 1.

QY 1 KESDDKHFRIEFLVKQROYVDHLEVMANEMQTTCOK--PETTNCVPOER 51
| : | : | : | : | : | : | : | : | :
Db 57 KATDDYYRRRLPRLVARAQGVGNNVFDFVEVGITLCKSPNLDICAFHQ 109

RESULT 14

Cystatin S precursor - human
 N:Alternate names: cystatin SA-III; salivary acidic protein-1
 C:Species: Homo sapiens (man)
 C:Date: 25-Feb-1995 #sequence_revision 08-Feb-1996 #text_change 16-Jul-1999
 C:Accession: S17667; S16500; A01272; A29603; S19280; A56608
 R:Bohsek, L.A.; Aguilere, A.; Levine, M.J.
 R:Biochem. J. 278, 627-635, 1991
 A:Title: Human salivary cystatin S. Cloning, sequence analysis, hybridization in situ and
 A:Reference number: S17667; MUID:91378918; PMID:1898352
 A:Accession: S17667
 A:Molecule type: mRNA
 A:Residues: 1-141 <BOB>
 A:Cross-references: EMBL:X54667; NID:G30365; PIDN:CAA38478.1; PID:G30366
 R:Limkin, M.S.; Jensen, J.L.; Setayesh, M.R.; Troxler, R.F.; Oppenheim, F.G.
 R:Arch. Biochem. Biophys. 288, 664-670, 1991
 A:Title: Salivary cystatin SA-III, a potential precursor of the acquired enamel pellicle
 A:Reference number: S16500; MUID:91378515; PMID:1898055
 A:Accession: S16500
 A:Status: preliminary
 A:Molecule type: protein
 A:Residues: 21-134, 'D', 136-141 <IHU>
 R:Isemura, S.; Saitoh, E.; Sanada, K.
 J. Biochem. 96, 489-498, 1994
 A:Title: Isolation and amino acid sequence of SP-1, an acidic protein of human whole saliv
 A:Reference number: A91985; MUID:85054716; PMID:6501254
 A:Accession: A01272
 A:Molecule type: protein
 A:Residues: 29-134, 'D', 136-141 <ISE>
 R:Isemura, S.; Saitoh, E.; Ito, S.; Isemura, M.; Sanada, K.
 J. Biochem. 96, 1311-1314, 1994
 A:Title: Cystatin S: a cysteine proteinase inhibitor of human saliva.
 A:Reference number: A91981; MUID:85104877; PMID:6394600
 A:Contents: annotation; inhibitor specificity
 R:Howke, D.H.; Yuan, P.W.; Wilson, K.J.; Hunkapiller, M.W.
 R:Biochem. Biophys. Res. Commun. 145, 1248-1253, 1987
 A:Title: Identification of a long form of cystatin from human saliva by rapid microbore
 A:Reference number: A29603; MUID:87270697; PMID:3496880
 A:Accession: A29603
 A:Molecule type: protein
 A:Residues: 21-51 <HAM>
 R:Ramashubbu, N.; Reddy, M.S.; Bergey, E.J.; Haraszthy, G.G.; Soni, S.D.; Levine, M.J.
 R:Biochem. J. 280, 341-352, 1991
 A:Title: Large-scale purification and characterization of the major phosphoproteins and
 A:Reference number: S19279; MUID:92082469; PMID:1747107
 A:Accession: S19280
 A:Status: preliminary
 A:Molecule type: protein
 A:Residues: 21-55 <RAM>
 R:Johnson, M.; Richardson, C.F.; Bergey, E.J.; Levine, M.J.; Nancollas, G.H.
 R:Arch. Oral Biol. 36, 621-636, 1991
 A:Title: The effects of human salivary cystatins and atherin on hydroxyapatite crystal
 A:Reference number: A56608; MUID:92074898; PMID:1741693
 A:Accession: A56608
 A:Molecule type: protein
 A:Residues: 21-36 <JOH>
 A:Note: Sequence extracted from NCBI backbone (NCBIP:67866)
 A:Note: authors designate form without phosphate as cystatin S and form containing one ph
 C:Comment: This protein strongly inhibits papsin and ficin, partially inhibits stem brom
 C:Genetics:
 A:Gene: GDB:CSR4
 A:Cross-references: GDB:136381
 A:Map position: 20p11.2-20p11.2

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OM protein - protein search, using sw model

Run on: March 23, 2004, 17:05:08 ; Search time 5.87448 Seconds

(Without alignments)
460.917 Million cell updates/sec

Title: US-09-941-314-14

Perfect score: 288
Sequence: 1 KESDDKXHRIFRVLKVRQ.....MOWTCKPPTNCVQERE 52

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 141681 seqs, 52070155 residues
Total number of hits satisfying chosen parameters: 141681

Minimum DB seq length: 10
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : SwissProt_42.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match Length	ID	Description
1	288	100.0	CS11_HUMAN	Q9H112 homo sapien
2	165	57.3	CS11_MOUSE	Q9D269 mus musculu
3	131	45.5	CS11_MOUSE	P32766 mus musculu
4	124	43.1	CS11_MOUSE	Q88959 rattus norv
5	117	40.6	CS11_MOUSE	Q80676 homo sapien
6	106	36.8	CS11_MOUSE	P14841 rattus norv
7	99	34.4	CS11_MOUSE	Q19083 salmistr sci
8	97	33.7	CS11_MOUSE	Q97862 onychomys
9	97	33.7	CS11_MOUSE	P31460 mus musculu
10	96	33.3	CS11_MOUSE	P01034 homo sapien
11	96	33.3	CS11_MOUSE	O19032 macaca mula
12	92	31.9	CS11_MOUSE	P01035 bos taurus
13	88	30.6	CS11_MOUSE	P01038 gallus gall
14	84	29.2	CS11_MOUSE	P01061 coturnix co
15	83.5	29.0	CS11_MOUSE	P08935 bitis ariet
16	83	28.8	CS11_MOUSE	Q9H114 homo sapien
17	82	28.5	CS11_MOUSE	P09228 homo sapien
18	76.5	26.6	CS11_MOUSE	P23055 onchocerca
19	75	26.0	CS11_MOUSE	P28325 homo sapien
20	75	26.0	CS11_MOUSE	P15828 homo sapien
21	73	25.3	CS11_MOUSE	P35481 cyprinus ca
22	71	24.7	CS11_MOUSE	P01037 homo sapien
23	69	24.0	CS11_MOUSE	P01036 homo sapien
24	65	22.6	CS11_MOUSE	Q88967 onchocerca
25	65	22.6	CS11_MOUSE	Q91155 onchocerca
26	64	22.2	CS11_MOUSE	P27967 hordeum vul
27	63	21.9	CS11_MOUSE	P09096 homo sapien
28	63	21.9	CS11_MOUSE	P29717 candida alb
29	61	21.2	CS11_MOUSE	Q97591 onychomys
30	61	21.2	CS11_MOUSE	Q99727 homo sapien
31	60	20.8	CS11_MOUSE	P34341 oryza sativ
32	59.5	20.7	CS11_MOUSE	P12771 mus musculu
33	59	20.5	CS11_MOUSE	P19313 rattus norv

34	58.5	20.3	144	1	CYTB_MOUSE	O89098 mus musculu
35	58.5	20.3	4540	1	DYHC_PARTB	Q27171 paramesitum
36	58	20.1	4436	1	EXG1_YEAST	P01046 bos taurus
37	58	20.1	448	1	EXG1_YEAST	P23776 saccharomyc
38	58	20.1	621	1	KNH1_BOVIN	P01044 bos taurus
39	57.5	20.0	107	1	TIM4_BOVIN	O97563 bos taurus
40	57.5	20.0	2200	1	LAR_CAEEL	Q9bms8 caenorhabdi
41	57	19.8	434	1	KNL2_BOVIN	P01047 bos taurus
42	57	19.8	619	1	KNH2_BOVIN	P01045 bos taurus
43	57	19.8	621	1	NIH1_MAIZE	P17571 zea mays (m
44	56	19.4	904	1	NIH1_TOBAC	P11605 nicotiana t
45	56	19.4	904	1	NIH2_TOBAC	P08509 nicotiana t

ALIGNMENTS

RESULT 1
ID CS11_HUMAN STANDARD; PRT; 137 AA.
AC Q9H112; Q9H113;
DT 28-FEB-2003 (Rel. 41, Last sequence update)
DT 28-FEB-2003 (Rel. 41, Last annotation update)
DE Cytactin 11 precursor.
GN Cytactin 11 precursor.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.
OX NCBI_Taxid=9606;
RN [1]
RP SEQUENCE FROM N.A. (ISOFORMS 1 AND 2).
RX MEDLINE=21638749; PubMed=11780052;
RA Deloukas P., Matthews L.H., Ashurst J., Burton J., Gilbert J.G.R., Jones M., Stavrides G., Almeida J.P., Babbage A.K., Bagguley C.L., Bailey J., Barlow K.F., Bates K.N., Beard L.M., Beare D.M., Beasley O.P., Bird C.P., Blakey S.E., Bridgman A.M., Brown A.J., Buck D., Burrill W.D., Butler A.P., Carder C., Carter N.P., Chapman J.C., Clamp W., Clark G., Clark L.N., Clark S.Y., Clee C.M., Clegg S., Cobley V.E., Collier R.E., Connor R.E., Corby N.R., Coulson A., Coville G.J., Deadman R., Dhami P.D., Dunn M., Ellington A.G., Frankland J.A., Frazer A.A., French L., Garner P., Graffham D.V., Griffiths C., Griffiths M.N.D., Gwilliam R., Hall R.E., Hammond S., Harley J.L., Heath P.D., Ho S., Holden J.L., Howden P.J., Huckle E., Hunt A.R., Hunt S.E., Jekosch K., Johnson C.M., Johnson D., Kay M.P., Kimberley A.M., King A., Knights A., Laird G.K., Lawlor S., Lhvaeslahti M.H., Leverisha M.A., Lloyd C., Lloyd D.M., Lovell J.D., Marsh V.L., Martin S.L., McComachie L.J., McKay K., McMuray A.A., Milne S.A., Mistry D., Moore M.J.F., Mullikin J.C., Nickerson T., Oliver K., Parker A., Patel R., Pearce T.A.V., Peck A.I., Phillimore B.J.C.T., Pratchalingam S.R., Plumb R.W., Ramsey H., Rice C.M., Rose M.T., Scott C.B., Sehra H.K., Showkeen R., Sims S., Skuse C.D., Smith M.L., Soderlund C., Steward C.A., Sulston J.E., Swan R.M., Symcote N., Taylor R., Tee L., Thomas D.W., Thorpe A., Tracey A., Tromans A.C., Vaudin M., Wall M., Wallis J.M., Whitehead S.L., Whiteaker P., Willey D.L., Williams L., Williams S.A., Wilming L., Wray P.W., Hubbard T., Durbin R.M., Bentley D.R., Beck S., Rogers J.;
RT "The DNA sequence and comparative analysis of human chromosome 20.";
RL Nature 414:865-871(2001).
-1- SUBCELLULAR LOCATION: Secreted (Potential).
-1- ALTERNATIVE PRODUCTS:
Event=Alternative splicing; Named isoforms=2;
Name=1;
IsoId=Q9H112-1; Sequence=Displayed;
Name=2;
IsoId=Q9H112-2; Sequence=VSP_001260;
Note=No experimental confirmation available;
-1- SIMILARITY: Belongs to the cyactin family.

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CC -----
 DR EMBL; AL096677; CAC13170.1; -
 DR EMBL; AL096677; CAC17423.1; -
 DR HSSP; P01038; 1A90.
 DR Genew; HGNC:15959; CST11.
 DR InterPro; IPR000010; Cystatln.
 DR Pfam; PF00031; Cystatln; 1.
 DR SMART; SM00043; Cy; 1.
 DR PROSITE; PS00287; CYSTATIN; FALSE_NEG.
 DR Thiol protease inhibitor; Signal; Alternative splicing.
 KW Thiol protease inhibitor; Signal.
 FT SIGNAL 1 25 POTENTIAL.
 FT CHAIN 1 25 CYSTATIN 11.
 FT SITE 26 137 SECONDARY AREA OF CONTACT (POTENTIAL).
 FT DISULFID 75 79 BY SIMILARITY.
 FT DISULFID 93 101 BY SIMILARITY.
 FT CARBOHYD 114 134 N-LINKED (GLCNAC. .) (POTENTIAL).
 FT VARSPLIC 131 131 Missing (in isoform 2).
 FT VARSPLIC 76 110 /FTId=VSP_001260.
 SQ SEQUENCE 137 AA; 16375 MW; C5856C39A585C3B CRC64;

Query Match 100.0%; Score 288; DB 1; Length 137;
 Best Local Similarity 100.0%; Pred. No. 8.6e-30;
 Matches 52; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 KESDDKHFRIFRVLKYQROVTHLEHYHNVEMQWTCCKPRTNCVPORE 52
 DB 56 KESDDKHFRIFRVLKYQROVTHLEHYHNVEMQWTCCKPRTNCVPORE 107

RESULT 2
 CS11_MOUSE STANDARD; PRT; 139 AA.
 ID CS11_MOUSE
 AC Q9D269;
 DT 28-FEB-2003 (Rel. 41, Created)
 DT 28-FEB-2003 (Rel. 41, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Cystatin 11 precursor.
 GN CST11.
 OS Mus musculus (Mouse).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
 OX NCBI_TaxID=10090;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN=C57BL/6J; TISSUE=Epididymis;
 RX MEDLINE=21085660; PubMed=11217851;
 RA Kawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
 RA Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamana K. I.,
 RA Saito T., Okazaki Y., Gotohori T., Bono H., Kasukawa T., Saito R.,
 RA Kadoya K., Matsuda H. A., Ashburner M., Batalov S., Casavant T.,
 RA Fleischmann W., Gaasterland T., Gissi C., King B., Kochava H.,
 RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
 RA Schriml L. M., Staahl F., Suzuki R., Tomita M., Wagner L., Washio T.,
 RA Sakai K., Oikido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
 RA Blake J., Botfeill D., Bojunga N., Carninci P., de Bonaldo M. F.,
 RA Brownstein W. J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
 RA Grotzinger S., Hill D., Hofmann M., Hume D. A., Kamiya M., Lee N. H.,
 RA Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,
 RA Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
 RA Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
 RA Suzuki H., Toyokawa K., Wang K. H., Weitz C., Whitaker C., Wilming L.,
 RA Wyshak-Boris A., Yoshida K., Hasegawa Y., Kawai H., Kohetsuki S.,
 RA Hayashizaki Y.,
 RT "Functional annotation of a full-length mouse cDNA collection."
 RL Nature 409:685-690(2001).
 CC -1- SUBCELLULAR LOCATION: Secreted (Potential).
 CC -1- SIMILARITY: Belongs to the cystatin family.

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CC -----
 DR EMBL; AK020300; BAB32061.1; -
 DR HSSP; P01034; 1G96.
 DR MGD; MGI:1925490; Cst11.
 DR InterPro; IPR000010; Cystatln.
 DR Pfam; PF00031; Cystatln; 1.
 DR SMART; SM00043; Cy; 1.
 DR PROSITE; PS00287; CYSTATIN; FALSE_NEG.
 DR Thiol protease inhibitor; Signal.
 KW Thiol protease inhibitor; Signal.
 FT SIGNAL 1 28 POTENTIAL.
 FT CHAIN 29 139 CYSTATIN 11.
 FT SITE 76 80 SECONDARY AREA OF CONTACT (POTENTIAL).
 FT DISULFID 94 102 BY SIMILARITY.
 FT DISULFID 115 135 BY SIMILARITY.
 FT CARBOHYD 134 134 N-LINKED (GLCNAC. .) (POTENTIAL).
 SQ SEQUENCE 139 AA; 16217 MW; F228D9815FA32640 CRC64;

Query Match 57.3%; Score 165; DB 1; Length 139;
 Best Local Similarity 59.6%; Pred. No. 4.3e-14;
 Matches 31; Conservative 9; Mismatches 12; Indels 0; Gaps 0;

QY 1 KESDDKHFRIFRVLKYQROVTHLEHYHNVEMQWTCCKPRTNCVPORE 52
 DB 57 KESDDKHFRIFRVLKYQROVTHLEHYHNVEMQWTCCKPRTNCVPORE 108

RESULT 3
 CST8_MOUSE STANDARD; PRT; 142 AA.
 ID CST8_MOUSE
 AC P32766; O89102;
 DT 01-OCT-1993 (Rel. 27, Created)
 DT 30-MAY-2000 (Rel. 39, Last sequence update)
 DT 28-FEB-2003 (Rel. 41, Last annotation update)
 DE Cystatin-related epididymal spermatogenic protein precursor (Cystatin-
 DE related epididymal specific protein) (Cystatin 8).
 GN CST8 OR CRES.
 OS Mus musculus (Mouse).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
 OX NCBI_TaxID=10090;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN=C3H, and CD-1;
 RX MEDLINE=99247899; PubMed=10229662;
 RA Cornwall G. A., Hata N., Sutton H. G.,
 RT "Structure, alternative splicing and chromosomal localization of the
 RT cystatin-related epididymal spermatogenic gene."
 RL Biochem. J. 340:85-93(1999).
 RN [2]
 RP SEQUENCE OF 4-142 FROM N.A.
 RC TISSUE=Epididymis;
 RX MEDLINE=93078799; PubMed=1280328;
 RA Cornwall G. A., O'Geach M. C., Hann S. R.,
 RT "The CRES gene: a unique testis-regulated gene related to the cystatin
 RT family is highly restricted in its expression to the proximal region
 RT of the mouse epididymis."
 RL Mol. Endocrinol. 6:1653-1664(1992).
 CC -1- FUNCTION: Performs a specialized role during sperm development and
 CC maturation.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- TISSUE SPECIFICITY: Proximal caput region of the epididymis. Lower
 CC expression in the testis. Within the testis it is localized to the
 CC elongating spermatids, whereas within the epididymis it is
 CC exclusively synthesized by the proximal caput epithelium.
 CC -1- INDUCTION: Testicular factors or hormones other than androgens
 CC present in the testicular fluid may be involved in the regulation

CC of CREB gene expression.
 CC -1- SIMILARITY: Belongs to the cystatin family.
 CC -----
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 CC -----
 CC EMBL: AF091503; AAC61754.1; -
 CC EMBL: AF090691; AAC6316.1; -
 CC EMBL: S49926; AAC35390.1; -
 CC PIR: A45361; A45361.
 CC HSP: P01034; I996.
 CC MGD: MGI:107161; Cat8.
 CC InterPro: IPR000010; Cystatin.
 CC Pfam: PF00031; cystatin; 1.
 CC SMART: SM00043; Cy: 1.
 CC K1: protease inhibitor; Signal.
 CC SIGNAL 1
 CC CHAIN 20 142
 CC SITE 77 81
 CC FT DISULFID 95 105
 CC FT DISULFID 119 139
 CC FT CARBOHYD 39 39
 CC FT CARBOHYD 100 100
 CC FT CONFLICT 4 15
 CC SQ SEQUENCE 142 AA; 16288 MW; 50B446B98F6672E CRC64;
 CC
 CC Query Match 45.5%; Score 131; DB 1; Length 142;
 CC Best Local Similarity 41.5%; Pred. No. 9.5e-10;
 CC Matches 22; Conservative 16; Mismatches 13; Indels 2; Gaps 1;
 CC
 CC 1 KESDDKXHFRIFFVLKVRQVTDLEHLNEMQWTCQRP--ETTCVPOER 51
 CC 58 KSESDKYLFLVDKTLIAKQITDMEYQIDVQISRSNCRKPLNNTENCIPQK 110
 CC
 CC RESULT 4
 CC CSTR_RAT STANDARD; PRT; 142 AA.
 CC AC 088969;
 CC DT 30-MAY-2000 (Rel. 39, Created)
 CC DT 30-MAY-2000 (Rel. 39, Last sequence update)
 CC DT 10-OCT-2003 (Rel. 42, Last annotation update)
 CC DE Cystatin-related epididymal spermatogenic protein precursor (Cystatin
 CC 8).
 CC GN CSTR OR CREB.
 CC OS Rattus norvegicus (Rat).
 CC OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 CC OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
 CC OX NCBI_TaxID=10116;
 CC RN [1]
 CC RP SEQUENCE FROM N.A.
 CC RC STRAIN=Sprague-Dawley; TISSUE=Epididymis;
 CC RX MEDLINE=99247899; PubMed=10292662;
 CC RA Cornwall G.A., Hsieh N., Sutton H.G.;
 CC RT "Structure, alternative splicing and chromosomal localization of the
 CC cystatin-related epididymal spermatogenic gene";
 CC RT Biochem. J. 340:85-93(1999).
 CC RL Biochem. J. 340:85-93(1999).
 CC CC -1- FUNCTION: Performs a specialized role during sperm development and
 CC maturation.
 CC -1- SUBCELLULAR LOCATION: Secreted (By similarity).
 CC -1- SIMILARITY: Belongs to the cystatin family.
 CC -----
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 CC -----
 CC EMBL: AF090692; AAC6317.1; -
 CC HSP: P01034; I996.
 CC InterPro: IPR000010; Cystatin.
 CC Pfam: PF00031; cystatin; 1.
 CC SMART: SM00043; Cy: 1.
 CC K1: protease inhibitor; Signal.
 CC SIGNAL 1
 CC CHAIN 20 142
 CC SITE 77 81
 CC FT DISULFID 95 105
 CC FT DISULFID 119 139
 CC FT CARBOHYD 100 100
 CC SQ SEQUENCE 142 AA; 16246 MW; FB873FAA6BCAB34 CRC64;
 CC
 CC Query Match 43.1%; Score 124; DB 1; Length 142;
 CC Best Local Similarity 42.3%; Pred. No. 7.4e-09;
 CC Matches 22; Conservative 13; Mismatches 15; Indels 2; Gaps 1;
 CC
 CC 1 KESDDKXHFRIFFVLKVRQVTDLEHLNEMQWTCQRP--ETTCVPOE 50
 CC 58 KSESDKYLFLVDKTLIAKQITDMEYQIDVQISRSNCRKPLNNTENCIPQK 109
 CC
 CC RESULT 5
 CC CSTR_HUMAN STANDARD; PRT; 142 AA.
 CC AC 060676;
 CC DT 30-MAY-2000 (Rel. 39, Created)
 CC DT 30-MAY-2000 (Rel. 39, Last sequence update)
 CC DT 28-FEB-2003 (Rel. 41, Last annotation update)
 CC DE Cystatin-related epididymal spermatogenic protein precursor (Cystatin
 CC 8).
 CC GN CSTR OR CREB.
 CC OS Homo sapiens (human).
 CC OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 CC OC Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.
 CC OX NCBI_TaxID=9606;
 CC RN [1]
 CC RP SEQUENCE FROM N.A.
 CC RC TISSUE=Testis;
 CC RX MEDLINE=95344753; PubMed=7619504;
 CC RA Cornwall G.A., Hann S.R.;
 CC RT "Transient appearance of CREB protein during spermatogenesis and
 CC caput epididymal sperm maturation";
 CC RT Mol. Reprod. Dev. 41:37-46(1995).
 CC RL [2]
 CC RN SEQUENCE FROM N.A.
 CC RX MEDLINE=21638749; PubMed=11780052;
 CC RA Deloukas P., Matthews L.H., Ashurst J., Burton J., Gilbert J.G.R.,
 CC RA Jones M., Stavrides G., Almeida J.P., Babbage A.K., Bagunley C.L.,
 CC RA Bailey J., Barlow K.F., Bates K.N., Beard L.M., Beare D.M.,
 CC RA Beasley O.P., Bird C.P., Blakey S.E., Brigeman A.M., Brown A.J.,
 CC RA Buck D., Burrill W.D., Butler A.P., Carder C., Carter N.P.,
 CC RA Chapman J.C., Clamp M., Clark G., Clark L.N., Clark S.Y., Clee C.M.,
 CC RA Clegg S., Cobley V.E., Collier R.B., Connor R.E., Corby N.R.,
 CC RA Coulson A., Coville G.J., Deadman R., Dhani P.D., Dunn M.,
 CC RA Ellington A.G., Frankland J.A., Fraser A., French L., Garner P.,
 CC RA Graham D.V., Griffiths C., Griffiths M.N.D., Gwilliam R., Hall R.E.,
 CC RA Hammond S., Harley J.L., Heath P.D., Ho S., Holden J.L., Howden P.J.,
 CC RA Huckle E., Hunt A.R., Hunt S.B., Jekosch K., Johnson C.M., Johnson D.,
 CC RA Kay M.P., Kimberley A.M., King A., Knights A., Laird G.K., Lawlor S.,
 CC RA Lehesaiaho M.H., Leverhwa M.A., Lloyd C., Lloyd D.M., Lovell J.D.,
 CC RA Marsh V.L., Martin S.L., McCormack L.J., McLeay K., McMurray A.A.,
 CC RA Milne S.A., Mistry D., Moore M.J.F., Mullikin J.C., Nickerson T.,
 CC RA Oliver K., Parker A., Patel R., Pearce T.A.V., Peck A.I.,
 CC RA Phillimore B.J.C.T., Prachalingam S.R., Plumb R.W., Ramsay H.,
 CC RA Rice C.M., Rose M.T., Scott C.E., Sehra H.K., Showkhen R., Sims S.,
 CC RA Stuce C.D., Smith M.L., Soderlund C., Steward C.A., Sulston J.E.,
 CC RA Swann R.M., Sycamore N., Taylor R., Tee L., Thomas D.W., Thorpe A.,

RA Tracey A., Tromans A.C., Vaudin M., Walli M., Wallis J.M., Williams S.A.,
RA Whitehead S.L., Whitaker P., Willey D.L., Williams L., Williams S.A.,
RA Wilming L., Wray P.W., Hubbard T., Durbin R.M., Bentley D.R., Beck S.,
RA Rogers J.,
RT "The DNA sequence and comparative analysis of human chromosome 20,"
RL Nature 414:865-871(2001).
CC -1- FUNCTION: Performs a specialized role during sperm development and
CC maturation.
CC -1- SUBCELLULAR LOCATION: Secreted.
CC -1- TISSUE SPECIFICITY: Proximal caput region of the epididymis. Lower
CC expression in the testis. Within the testis it is localized to the
CC elongating spermatids, whereas within the epididymis it is
CC exclusively synthesized by the proximal caput epithelium.
CC -1- SIMILARITY: Belongs to the cystatin family.

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CC
CC EMBL; AF059244; AAC14707.1; -
DR EMBL; AL109954; CAB64234.1; -
DR HSSP; P01034; 1G96.
DR Genew; HGNC:2480; CST8.
DR GO; GO:0004869; F:cysteine protease inhibitor activity; TAS.
DR InterPro; IPR00010; Cystatin.
DR Pfam; PF00031; cystatin; 1.
DR SMART; SM00043; CY; 1.
KW Thiol protease inhibitor; Signal; Polymorphism.
FT SIGNAL 1 21
FT CHAIN 22 142
FT FT 22 142
FT FT 77 81
FT DISULFID 95 105
FT DISULFID 119 139
FT CARBOHYD 27 27
FT CARBOHYD 39 39
FT VARIANT 142 142
SQ SEQUENCE 142 AA; 16275 MW; 9A3512757E0F4ECD CQC64;
Query Match 40.6%; Score 117; DB 1; Length 142;
Best Local Similarity 48.1%; Pred. No. 5.8e-08;
Matches 25; Conservative 11; Mismatches 14; Indels 2; Gaps 1;
OY 1 KESDDKHFRIFRYLVKQVROVTDHLEHLNEMQMTQCKRETN--CVPOE 50
DB 58 KESDDKVFVFLVVKTLQAOLOVTLLELYLDIVELARSDCRKLSTNEICAIQE 109
ID CYTC RAT STANDARD; PRT; 127 AA.
AC P14841;
DT 01-APR-1990 (Rel. 14, Created)
DT 01-APR-1990 (Rel. 14, Last sequence update)
DT 28-FEB-2003 (Rel. 41, Last annotation update)
DE Cystatin C precursor (Fragment).
GN CST3.
OS Rattus norvegicus (Rat).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
OX NCBI_Taxid=10116;
RA [1]
RA SEQUENCE FROM N.A.
RA STRAIN=Bufalo;
RX MEDLINE=90092122; PubMed=2689174;
RA Cole T., Dickson P.W., Esmad F., Averill F., Risbridger G.,
RA Gauthier F., Schreiber G.,
RT "The cDNA structure and expression analysis of the genes for the

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RT      cysteine proteinase inhibitor cystatin C and for beta 2-microglobulin
RT      in rat brain."
RL      Eur. J. Biochem. 186:35-42(1989).
RN      [2]
RP      SEQUENCE OF 8-127.
RX      MEDLINE=90380276; PubMed=2400577;
RA      Bernard F., Bernard A., Faucher D., Capony J.-P., Derancourt J.,
RA      Billard M., Gauthier F.;
RT      "Rat cystatin C: the complete amino acid sequence reveals a site for
RT      N-glycosylation."
RL      Biol. Chem. Hoppe-Seyler 371:161-166(1990).
RN      [3]
RP      SEQUENCE OF 8-49.
RX      MEDLINE=88313020; PubMed=3044831;
RA      Bernard A., Bernard F., Faucher D., Gauthier F.;
RT      "Two rat homologues of human cystatin C."
RL      FEBS Lett. 236:475-478(1988).
RN      [4]
RP      SEQUENCE OF 8-20.
RX      MEDLINE=92225121; PubMed=1563513;
RA      Bernard A., Bernard F., Guillou F., Gauthier F.;
RT      "Production of the cysteine proteinase inhibitor cystatin C by rat
RT      Sertoli cells."
RL      FEBS Lett. 300:131-135(1992).
CC      -1- FUNCTION: As an inhibitor of cysteine proteinases, this protein is
CC      thought to serve an important physiological role as a local
CC      regulator of this enzyme activity. Known to inhibits cathepsin B,
CC      H, and L.
CC      -----
CC      -1- SIMILARITY: Belongs to the cystatin family.
CC      -----
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CC      -----
DR      EMBL; X16957; CAA34831.1; -.
DR      PIR; S07085; S07085.
DR      PIR; S10587; S10587.
DR      HSSP; P01034; 1G96.
DR      InterPro; IPR000010; Cystatin.
DR      Pfam; PF00031; cystatin, 1.
DR      SMART; SM00043; CY, 1.
DR      PROSITE; PS00287; CYSTATIN, 1.
KW      Thiol proteinase inhibitor; signal.
FT      NON TER          1          1
FT      SIGNAL          <1          7
FT      CHAIN           8          127
FT      ACT SITE       18          18
FT      SITE           62          66
FT      DISULFID       80          90
FT      DISULFID       104         124
FT      CONFLICT       25          25
SQ      SEQUENCE       127 AA; 14039 MW; 78F70158B7925853 CRC64;
Query Match          36.8%; Score 106; DB 1; Length 127;
Match Local Similarity 43.8%; Pred. No. 1, 3e-06;
Matches 21; Conservative 11; Mismatches 14; Indels 2; Gaps 1;
Qy      1 KESDDKYHFRIFRYLKVQROVTHLEHYHNVEMQMTTCQKREF--TNC 46
Db      43 KGSNDAYHSRAIGVVRARQDQVAGINYYLDVEMGRITCTKSQTLNLTNC 90
RESULT 7
ID      CYTC_SAISC      STANDARD;          PRT;          146 AA.
AC      019093;
DT      15-JUL-1998 (Rel. 36, Created)
DT      15-JUL-1998 (Rel. 36, Last sequence update)

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DT 28-FEB-2003 (Rel. 41, last annotation update)
 DE Cystatin C precursor.
 GN CST3.
 OS Saimiri sciureus (common squirrel monkey).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 CC Mammalia; Eutheria; Primates; Platyrrhini; Cebidae; Saimiri.
 RX NCBI_TaxID=9521;
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=97054523; PubMed=8898820;
 RA Wei L.H., Walker L.C., Levy B.;
 RT "Cystatin C, Icelandic-like mutation in an animal model of
 RT cerebrovascular beta-amyloidosis.";
 RL Stroke 27:2080-2085(1996)
 CC - FUNCTION: As an inhibitor of cysteine proteinases, this protein is
 CC thought to serve an important physiological role as a local
 CC regulator of this enzyme activity.
 CC - SIMILARITY: Belongs to the cystatin family.
 CC -----
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 CC -----
 CC EMBL: U52028; AAB64051.1; -
 CC HSSP: P01034; 1G96.
 DR InterPro: IPR000010; Cystatin.
 DR Pfam: PF00031; Cystatin; 1.
 DR SMART: SM00043; Cy; 1.
 DR PROSITE: PS00287; CYSTATIN; 1.
 KW Thiol protease inhibitor; Amyloid; Signal.
 FT SIGNAL 1 26 BY SIMILARITY.
 FT CHAIN 27 146 CYSTATIN C.
 FT ACT SITE 37 37 REACTIVE SITE.
 FT SITE 81 85 SECONDARY AREA OF CONTACT.
 FT DISULFID 99 109 BY SIMILARITY.
 FT DISULFID 123 143 BY SIMILARITY.
 SQ SEQUENCE 146 AA; 15946 MW; 08196353C0306AA3 CRC64;
 Query Match 34.4%; Score 99; DB 1; Length 146;
 Best Local Similarity 41.7%; Pred. No. 1.2e-05;
 Matches 20; Conservative 9; Mismatches 17; Indels 2; Gaps 1;
 QY 1 KESDDKXHFRIFRVAKYQOVTDHLEHYLVNEMQWTCQK--PETTNC 46
 Db 62 KASNDKXHFRIFRVAKYQOVTDHLEHYLVNEMQWTCQK--PETTNC 109
 Db KASNDKXHFRIFRVAKYQOVTDHLEHYLVNEMQWTCQK--PETTNC 109
 RESULT 8
 CYTC_RABBIT STANDARD; PRT; 148 AA.
 AC 097863;
 DT 15-OCT-2001 (Rel. 40, Created)
 DT 16-OCT-2001 (Rel. 40, last sequence update)
 DT 28-FEB-2003 (Rel. 41, last annotation update)
 DE Cystatin C precursor.
 GN CST3.
 OS Oryzctolagus cuniculus (Rabbit).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 CC Mammalia; Eutheria; Lagomorpha; Leporidae; Oryzctolagus.
 RX NCBI_TaxID=9986;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN=Japanese white; TISSUE=Bone;
 RX MEDLINE=98424349; PubMed=9753427;
 RA Kobori M., Ikeda Y., Nara H., Kato M., Kamegawa M., Nojima H.,
 RA Kawabuchi H.;
 RT "Large scale isolation of osteoclast-specific genes by an improved
 RT method involving the preparation of a subtracted cDNA library.";
 RL Genes Cells 3:459-475(1998).

CC - FUNCTION: This is a thiol proteinase inhibitor.
 CC - SIMILARITY: Belongs to the cystatin family.
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 CC -----
 CC EMBL: AB009342; BAA75921.1; -
 CC HSSP: P01034; 1G96.
 DR InterPro: IPR000010; Cystatin.
 DR Pfam: PF00031; Cystatin; 1.
 DR SMART: SM00043; Cy; 1.
 DR PROSITE: PS00287; CYSTATIN; PALSE_NEG.
 KW Thiol protease inhibitor; Signal.
 FT SIGNAL 1 28 POTENTIAL.
 FT CHAIN 29 148 CYSTATIN C.
 FT ACT SITE 39 39 REACTIVE SITE.
 FT SITE 83 87 SECONDARY AREA OF CONTACT.
 FT DISULFID 101 111 BY SIMILARITY.
 FT DISULFID 125 145 BY SIMILARITY.
 SQ SEQUENCE 148 AA; 16346 MW; 1523C8311695B9A CRC64;
 Query Match 34.4%; Score 99; DB 1; Length 148;
 Best Local Similarity 39.6%; Pred. No. 1.2e-05;
 Matches 19; Conservative 13; Mismatches 14; Indels 2; Gaps 1;
 QY 1 KESDDKXHFRIFRVAKYQOVTDHLEHYLVNEMQWTCQK--TNC 46
 Db 64 KGSNDKXHFRIFRVAKYQOVTDHLEHYLVNEMQWTCQK--TNC 111
 Db KGSNDKXHFRIFRVAKYQOVTDHLEHYLVNEMQWTCQK--TNC 111
 RESULT 9
 CYTC_MOUSE STANDARD; PRT; 140 AA.
 AC P21460;
 DT 01-MAY-1991 (Rel. 18, Created)
 DT 01-FEB-1996 (Rel. 33, last sequence update)
 DT 10-OCT-2003 (Rel. 42, last annotation update)
 DE Cystatin C precursor (Cystatin 3).
 GN CST3.
 OS Mus musculus (Mouse).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 CC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
 RX NCBI_TaxID=10090;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN=BALB/c; TISSUE=Brain;
 RX MEDLINE=91054522; PubMed=2241983;
 RA Solem M., Rawson C., Lindburg K., Barnes D.;
 RT "Transforming growth factor beta regulates cystatin C in serum-free
 RT mouse embryo (SPME) cells.";
 RL Biochem. Biophys. Res. Commun. 172:945-951(1990).
 RN [2]
 RP SEQUENCE FROM N.A.
 RC STRAIN=129/SV; TISSUE=Liver;
 RX MEDLINE=95137392; PubMed=7835704;
 RA Hub C., Nagle J.W., Kozak C.A., Abrahamson M., Karlsson S.;
 RT "Structural organization, expression and chromosomal mapping of the
 RT mouse cystatin-C-encoding gene (Cst3).";
 RL Gene 152:221-226(1995).
 RN [3]
 RP SEQUENCE FROM N.A.
 RC STRAIN=ILS; and ISS;
 RX MEDLINE=21363810; PubMed=11471062;
 RA Ehringer M.A., Thompson J., Conroy O., Xu Y., Yang F., Cammiff J.,
 RA Beeson M., Gordon L., Bennett B., Johnson T.B., Sikeia J.M.;
 RT "High-throughput sequence identification of gene coding variants
 RT within alcohol-related QTLs.";
 RL Mamm. Genome 12:657-663(2001).

[4]
 RN SEQUENCE FROM N.A.
 RP MEDLINE=22386257; PubMed=12477932;
 RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
 RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
 RA Altshuler S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
 RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Heide F.,
 RA Diachenko L., Marisla K., Farmer A., Rubin G.M., Hong L.,
 RA Stapleton M., Soares M.B., Bonaldi M.F., Casavant T.L., Scheetz T.E.,
 RA Brownstein M.J., Udell T.B., Toshiyuki S., Cantancic P., Prange C.J.,
 RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullany S.J.,
 RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
 RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
 RA Villalón D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
 RA Fahey J., Helton E., Kettelman M., Madan A., Rodriguez S., Sanchez A.,
 RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
 RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
 RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
 RA Butlerfield Y.S.N., Krzywinski M.I., Skalek U., Smallen D.E.,
 RA Scherch A., Schein J.E., Jones S.J.M., Marra M.A.;
 RT "Generation and initial analysis of more than 15,000 full-length
 human and mouse cDNA sequences.";
 RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
 CC -1- FUNCTION: As an inhibitor of cysteine proteinases, this protein is
 CC thought to serve an important physiological role as a local
 CC regulator of this enzyme activity.
 CC -1- SIMILARITY: Belongs to the cystatin family.
 CC -----
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EMBL: M59470; AAA63298.1; -
 EMBL: U10098; AAB41056.1; -
 EMBL: AF483486; AAL90760.1; -
 EMBL: AF483487; AAL90761.1; -
 EMBL: BC020722; AAH02072.1; -
 PIR: A36163; A36163.
 DR HSP: P01034; I966.
 DR MGD: MGI:102519; Cat3.
 DR InterPro: IPR000010; Cystatin.
 DR Pfam: PF00031; Cystatin; 1.
 DR SMART: SM00043; Cy; 1.
 DR PROSITE: PS00287; CYSTATIN; 1.
 DR Thiol protease inhibitor; Signal.
 FT CHAIN 1 20
 FT SIGNAL 1 20
 FT ACT_SITE 31 140 CYSRATIN C.
 FT SITE 75 79 SECONDARY AREA OF CONTACT.
 FT DISULFID 93 103 BY SIMILARITY.
 FT DISULFID 117 137 BY SIMILARITY.
 FT CONFLICT 16 16 A -> G (IN REF. 1).
 FT CONFLICT 84 84 L -> F (IN REF. 1).
 FT SEQUENCE 140 AA; 15531 MM; 3A563406DD58D0F5 CRC64;

Query Match 33.7%; Score 97; DB 1; Length 140;
 Best Local Similarity 41.7%; Pred. No. 2e-05;
 Matches 20; Conservative 11; Mismatches 15; Indels 2; Gaps 1;

QY 1 KESDDKTHFRIYVAVKQVOTDLEHVLNVEQWTTCCQKPE--TNC 46
 DB 56 KGSNDAYHSPRAIQVRAKQQLVAGVNYFLDVMGRITCTKSQIWLTD 103

RESULT 10
 ID CYTC_HUMAN STANDARD; PRT; 146 AA.
 AC P01034;
 DT 21-JUL-1986 (Rel. 01, Created)

DT 01-AUG-1988 (Rel. 08, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Cystatin C precursor (Neuroendocrine basic polypeptide) (gamma-trace)
 DE (Post-gamma-globulin).
 GN CST3.
 OS Homo sapiens (Human).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.
 ON NCBI_Taxid=9606;
 RX [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Placenta;
 RX MEDLINE=87219149; PubMed=3495457;
 RA Abramson M., Grubb A., Olafsson I., Lundwall A.;
 RT "Molecular cloning and sequence analysis of cDNA coding for the
 RT precursor of the human cysteine proteinase inhibitor cystatin C.";
 RL FEBS Lett. 216:229-233(1987).
 RN [2]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Leukocyte;
 RX MEDLINE=90303202; PubMed=2363674;
 RA Abramson M., Olafsson I., Paladocitr A., Ulvsbaeck M., Lundwall A.,
 RA Jansson O., Grubb A.;
 RT "Structure and expression of the human cystatin C gene.";
 RL Biochem. J. 268:287-294(1990).
 RN [3]
 RP SEQUENCE FROM N.A. (HCHWA VARIANT).
 RC TISSUE=Brain;
 RX MEDLINE=89235594; PubMed=2541223;
 RA Levy E., Lopez-Otin C., Ghiso J., Gelner D., Frangione B.;
 RT "Stroke in Icelandic patients with hereditary amyloid angiopathy is
 RT stroke to a mutation in the cystatin C gene, an inhibitor of
 RT cysteine proteinases.";
 RL J. Exp. Med. 169:1771-1778(1989).
 RN [4]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=89350949; PubMed=2764935;
 RA Saitoh E., Sabatini L.M., Eddy R.L., Shows T.B., Azen E.A.;
 RA Iemura S., Sanada K.;
 RT "The human cystatin C gene (CST3) is a member of the cystatin gene
 RT family which is localized on chromosome 20.";
 RL Biochem. Biophys. Res. Commun. 162:1324-1331(1989).
 RN [5]
 RP SEQUENCE FROM N.A.
 RA Dickinson D.P., Hewett-Emmett D., Thiesse M.;
 RT "Acquisition of complex patterns of differential expression in
 RT epithelial cell populations during the evolution of type 2 cystatin
 RT genes.";
 RL Submitted (NOV-2000) to the EMBL/GenBank/DBJ databases.
 RN [6]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=21638749; PubMed=11780052;
 RA Deloukas P., Matthews L.H., Ashurst J., Burton J., Gilbert J.G.R.,
 RA Jones M., Stavrides G., Almeida J.P., Babbage A.K., Baguley C.L.,
 RA Bailey J., Barlow K.F., Bates K.N., Beard L.M., Beare D.M.,
 RA Beasley O.P., Bird C.P., Blakey S.E., Bridgman A.M., Brown A.J.,
 RA Buck D., Burrill W.D., Butler A.P., Gardner C., Carter N.P.,
 RA Chapman J.C., Clamp M., Clark G., Clark L.N., Clark S.Y., Clee C.M.,
 RA Clegg S., Cobley V.E., Collier R.E., Connor R.E., Corby N.R.,
 RA Coulson A., Coville G.J., Deadman R., Dhami P.D., Dunn M.,
 RA Ellington A.G., Frankland J.A., Fraser A.A., French L., Garner P.,
 RA Graffham D.V., Griffiths C., Griffiths M.N.D., Gwilliam R., Hall R.E.,
 RA Hammond S., Harley J.L., Heath P.D., Ho S., Holden J.L., Howden P.J.,
 RA Huckle E., Hunt A.R., Hunt S.E., Jekosch K., Johnson C.M., Johnson D.,
 RA Kay M.P., Kimberley A.M., King A., Knights A., Laird G.K., Lawlor S.,
 RA Lechay S., Leversha M.A., Lloyd C., Lloyd D.M., Lovell J.D.,
 RA Marsh V.L., Martin S.L., McComachie L.J., McInay K., McNair A.A.,
 RA Milne S.A., Mistry D., Moore M.J.F., Mullikin J.C., Nickerson T.,
 RA Oliver K., Parker A., Patel A., Pearce T.A.V., Peck A.I.,
 RA Phillimore B.J.C.T., Prathalingam S.R., Plumb R.W., Ramsay H.,
 RA Rice C.M., Rose M.T., Scott C.E., Sehra H.K., Showstreen R., Sims S.,
 RA Skuce C.D., Smith M.L., Soderlund C., Steward C.A., Sulston J.E.,
 RA Swann R.M., Sycamore N., Taylor R., Tee L., Thomas D.W., Thorpe A.,

RA Tracey A., Tromans A.C., Vaudin M., Wall M., Wallis J.M.,
 RA Whitehead S.L., Whitaker P., Willey D.L., Williams L., Williams S.A.,
 RA Wilming L., Wray P.W., Hubbard T., Durbin R.M., Bentley D.R., Beck S.,
 RA Rogers J.,
 RT "The DNA sequence and comparative analysis of human chromosome 20.",
 RL Nature 414:865-871(2001).
 RN [7]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Brain;
 RX MEDLINE=23388257; PubMed=12477932;
 RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
 RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Bhat N.K.,
 RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
 RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
 RA Diachenko L., Marusik K., Farmer A.A., Rubin G.M., Hong L.,
 RA Scapleton M., Soares M.B., Donald M.F., Casavant T.L., Scheetz T.E.,
 RA Brownstein M.J., Uadin T.B., Toshitsuki S., Carninci P., Prange C.,
 RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullaly S.J.,
 RA Bosak S.A., McKernan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
 RA Villalón D.K., Muzny K.C., Hale S., Garcia A.M., Gay L.J., Hultk S.W.,
 RA Fahy J., Halton E., Kettelman M., Madan A., Rodriguez S., Sanchez A.,
 RA Blakesley R.W., Touchman J.W., Green B.D., Dickson M.C.,
 RA Rodriguez A.C., Krzywinski M.I., Skalska U., Smalins D.E.,
 RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.,
 RT "Generation and initial analysis of more than 15,000 full-length
 RT human and mouse cDNA sequences.",
 RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
 RN [8]
 RP SEQUENCE OF 27-146.
 RX MEDLINE=82222268; PubMed=6283552;
 RA Grubb A., Loeffberg H.,
 RT "Human gamma-trace, a basic microprotein: amino acid sequence and
 RT presence in the adenohypophysis.",
 RL Proc. Natl. Acad. Sci. U.S.A. 79:3024-3027(1982).
 RN [9]
 RP SEQUENCE OF 27-73.
 RX MEDLINE=84110059; PubMed=6662498;
 RA Turk V., Brzin J., Longer M., Ritonja A., Bropink M., Borchart U.,
 RA Machleidt W.,
 RT "Protein inhibitors of cysteine proteinases. III. Amino-acid sequence
 RT of cystatin from chicken egg white.",
 RL Hoppe-Seyler's Z. Physiol. Chem. 364:1487-1496(1983).
 RN [10]
 RP SEQUENCE OF 27-76.
 RX MEDLINE=84128015; PubMed=6365094;
 RA Brzin J., Popovic T., Turk V.,
 RT "Human cystatin, a new protein inhibitor of cysteine proteinases.",
 RL Biochem. Biophys. Res. Commun. 118:103-109(1984).
 RN [11]
 RP DISULFIDE BONDS.
 RA Grubb A., Loeffberg H., Barrett A.J.,
 RT "The disulphide bridges of human cystatin C (gamma-trace) and chicken
 RT cystatin.",
 RL FEBS Lett. 170:370-374(1984).
 RN [12]
 RP X-RAY CRYSTALLOGRAPHY (2.50 ANGSTROMS) OF 27-146.
 RX MEDLINE=21173909; PubMed=11276250;
 RA Janowski R., Kozak M., Jankowska E., Grzonka Z., Grubb A.,
 RA Abrahamson M., Jaskolski M.,
 RT "Human cystatin C, an amyloidogenic protein, dimerizes through
 RT three-dimensional domain swapping.",
 RL Nat. Struct. Biol. 8:316-320(2001).
 RN [13]
 RP VARIANT GLN-94.
 RX MEDLINE=92316504; PubMed=1352269;
 RA Abrahamson M., Jonsdottir S., Olafsson I., Jenson O., Grubb A.,
 RT "Hereditary cystatin C amyloid angiopathy: identification of the
 RT disease-causing mutation and specific diagnosis by polymerase chain
 RT reaction based analysis.",
 RL Hum. Genet. 89:377-380(1992).

CC -1- FUNCTION: As an inhibitor of cysteine proteinases, this protein is
 CC thought to serve an important physiological role as a local
 CC regulator of this enzyme activity.
 CC -1- SUBUNIT: Homodimer.
 CC -1- TISSUE SPECIFICITY: Expressed in highest levels in the epididymis,
 CC vas deferens, brain, thymus, and ovary and the lowest in the
 CC submandibular gland.
 CC -1- DISEASE: Defects in CST3 are a cause of hereditary cerebral
 CC hemorrhage with amyloidosis (HCHWA) (MIM:105150); also known as
 CC cerebral amyloid angiopathy (CAA) or cerebroarterial amyloidosis
 CC Icelandic type. HCHWA is characterized by a thickening of the
 CC cerebral arteries walls with deposition of material with the
 CC characteristics of amyloid.
 CC -1- SIMILARITY: Belongs to the cystatin family.
 CC -----
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 CC -----
 DR EMBL: X05607; CAA29096.1; -;
 DR EMBL: X52255; CAA36497.1; -;
 DR EMBL: M27893; AAA52164.1; -;
 DR EMBL: M27889; AAA52164.1; JOINED.
 DR EMBL: M27890; AAA52164.1; JOINED.
 DR EMBL: X61681; CAA43856.2; -;
 DR EMBL: X61682; CAA43856.2; JOINED.
 DR EMBL: X61683; CAA43856.2; JOINED.
 DR EMBL: AP319564; AKK1570.1; -;
 DR EMBL: AL121894; CAC05424.1; -;
 DR EMBL: BC013083; AAH13083.1; -;
 DR PIR: S10216; UDHU.
 DR PDB: 1G96; 06-APR-01.
 DR Genew: HGNC:2475; CST3.
 DR MIM: 604312; -;
 DR MIM: 105150; -;
 DR InterPro: IPR000010; Cystatin.
 DR Pfam: PF00031; cystatin; 1.
 DR SMART: SM00043; Cy; 1.
 DR PROSITE: PS00267; CYSTATIN; 1.
 KW Thiol protease inhibitor; Amyloid; Signal; Disease mutation;
 KW Polymorphism; 3D-structure.
 FT SIGNAL 1 26
 FT CHAIN 27 146
 FT ACT SITE 37 37 REACTIVE SITE.
 FT SITE 81 85 SECONDARY AREA OF CONTACT.
 FT DISULFID 99 109
 FT DISULFID 123 143
 Query Match 33.3%; Score 96; DB 1; Length 146;
 Best Local Similarity 39.6%; Pred. No. 2,9e-05;
 Matches 19; Conservative 10; Mismatches 17; Indels 2; Gaps 1;
 QY 1 KESDDKTHFRIPVLKQVOTDHLBYHLNVERQWTTQCK--PRTNG 46
 Db 62 KAANDMWSRALQVAPRAKQIVAGVNVYFLDVEIGRTCTQTPNLDNC 109
 RESULT 11
 CYTC MACMU STANDARD; PRT; 146 AA.
 AC 019092;
 DT 15-JUN-1998 (Rel. 36, Created)
 DT 15-JUN-1998 (Rel. 36, Last sequence update)
 DT 28-FEB-2003 (Rel. 41, Last annotation update)
 DE Cystatin C precursor.
 GN CST3.
 OS Macaca mulatta (Rhesus macaque).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Primates; Catarrhini; Cercopithecoidea;

CC Cercopithecinae; Macaca.
 OX NCBI_TaxID=9544;
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=97054523; PubMed=8898820;
 RA Wei L.H., Walker L.C., Levy E.;
 RT "Cystatin C, Icelandic-like mutation in an animal model of
 cerebровассuлар beta-amyloidosis.";
 RL Stroke 27:2080-2085 (1996).
 CC
 CC -1- FUNCTION: As an inhibitor of cysteine proteinases, this protein is
 thought to serve an important physiological role as a local
 regulator of this enzyme activity.
 CC
 CC -1- SIMILARITY: Belongs to the cystatin family.
 CC
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 or send an email to license@isb-sib.ch).
 CC
 CC -----
 DR EMBL; U51912; AAB64050.1; -.
 DR HSSP; P01034; 1G96.
 DR InterPro; IPR000010; Cystatin.
 DR Pfam; PF00031; cystatin; 1.
 DR SMART; SM00043; CY; 1.
 DR PROSITE; PS00287; CYSTATIN; 1.
 DR PROSITE; PS00287; CYSTATIN; 1.
 KW Thiol protease inhibitor; Amyloid; Signal.
 FT SIGNAL 1 26
 FT CHAIN 27 146
 FT ACT_SITE 37 37 REACTIVE SITE.
 FT SITE 81 85 SECONDARY AREA OF CONTACT.
 FT DISUFID 99 109 BY SIMILARITY.
 FT DISUFID 123 143 BY SIMILARITY.
 SQ SEQUENCE 146 AA; 15857 MW; F0B3BB774A25DF26 CRC64;
 Query Match 33.3%; Score 96; DB 1; Length 146;
 Best Local Similarity 39.6%; Pred. No. 2.9e-05;
 Matches 19; Conservative 10; Mismatches 17; Indels 2; Gaps 1;
 QY 1 KESDDKHFRIFRVLYKQKQVDTLHLYHNVEMQWTTCKR--PETTNC 46
 DB 62 KASNDWYHSLQVVRARKQIVAGVNYFLDVELGRITCTKQPLDNC 109
 RESULT 12
 ID CYTC_BOVIN STANDARD; PRT; 148 AA.
 AC CYTC_BOVIN
 DT 21-JUL-1986 (Rel. 01, Created)
 DT 15-JUL-1999 (Rel. 38, Last sequence update)
 DT 28-FEB-2003 (Rel. 41, Last annotation update)
 DE Cystatin C precursor (Colostrum thiol proteinase inhibitor).
 OS Bos taurus (Bovine).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae;
 OC Bovidae; Bovinae; Bos.
 OX NCBI_TaxID=9913;
 RN [1]
 RP SEQUENCE FROM N.A., SEQUENCE OF 66-83, AND CHARACTERIZATION.
 RC TISSUE=Cerebrospinal fluid, and Choroid plexus;
 RX MEDLINE=98094199; PubMed=9434110;
 RA Olsson S.-L., Ek B., Wilm M., Broberg S., Rask L., Bjoeck I.;
 RT "Molecular cloning and N-terminal analysis of bovine cystatin C
 identification of a full-length N-terminal region.";
 RL Biochem. Biophys. Acta 1343:203-210(1997).
 RN [2]
 RP SEQUENCE OF 37-148.
 RX MEDLINE=85231205; PubMed=3891407;
 RA Hirado M., Tanasawa S., Sakiyama F., Ninobe M., Fujii S.;
 RT "Complete amino acid sequence of bovine colostrum low-Mr cysteine

RT proteinase inhibitor.";
 RL FEBS Lett. 186:41-45(1985).
 CC -1- FUNCTION: This is a thiol proteinase inhibitor.
 CC -1- MASS SPECTROMETRY: MW=13420; METHOD=MALDI.
 CC
 CC -1- SIMILARITY: Belongs to the cystatin family.
 CC
 CC -----
 DR EMBL; Y10811; CAA71771.1; -.
 DR HSSP; P01034; 1G96.
 DR InterPro; IPR000010; Cystatin.
 DR Pfam; PF00031; cystatin; 1.
 DR SMART; SM00043; CY; 1.
 DR PROSITE; PS00287; CYSTATIN; 1.
 KW Thiol protease inhibitor; Signal; Pyrrolidone carboxylic acid.
 FT SIGNAL 1 30
 FT CHAIN 31 148
 FT MOD_RES 31 31
 FT ACT_SITE 40 40 REACTIVE SITE.
 FT SITE 84 88 SECONDARY AREA OF CONTACT.
 FT DISUFID 102 112 BY SIMILARITY.
 FT DISUFID 126 146 BY SIMILARITY.
 SQ SEQUENCE 148 AA; 16265 MW; E6740FE37CFB9F0E CRC64;
 Query Match 31.9%; Score 92; DB 1; Length 148;
 Best Local Similarity 40.5%; Pred. No. 9.4e-05;
 Matches 17; Conservative 10; Mismatches 15; Indels 0; Gaps 0;
 QY 1 KESDDKHFRIFRVLYKQKQVDTLHLYHNVEMQWTTCKRPE 42
 DB 65 KRSNDAYQSRVVRVRARKQVSGMNYFLDVELGRITCTKQSQ 106
 RESULT 13
 ID CYT_CHICK STANDARD; PRT; 139 AA.
 AC CYT_CHICK
 DT 21-JUL-1986 (Rel. 01, Created)
 DT 01-OCT-1989 (Rel. 12, Last sequence update)
 DT 28-FEB-2003 (Rel. 41, Last annotation update)
 DE Cystatin precursor (Egg-white cystatin).
 OS Gallus gallus (Chicken).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
 OC Gallinae.
 OX NCBI_TaxID=9031;
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=90008873; PubMed=2793849;
 RA Colella R., Sakaguchi Y., Nagase H., Bird J.W.C.;
 RT "Chicken egg white cystatin. Molecular cloning, nucleotide sequence,
 RT and tissue distribution.";
 RL J. Biol. Chem. 264:17164-17169(1989).
 RN [2]
 RP SEQUENCE OF 24-139.
 RX MEDLINE=84178305; PubMed=6712597;
 RA Schwabe C., Anastasi A., Crow H., McDonald J.K., Barrett A.J.;
 RT "Cystatin. Amino acid sequence and possible secondary structure.";
 RL Biochem. J. 217:813-817(1984).
 RN [3]
 RP SEQUENCE OF 24-139.
 RX MEDLINE=84110059; PubMed=6662498;
 RA Turk V., Brzin J., Longer M., Ritonja A., Eropkin M., Borchart U.,
 RA Machleidt W.;
 RT "Protein inhibitors of cysteine proteinases. III. Amino-acid sequence
 of cystatin from chicken egg white.";
 RL Hoppe-Seyler's Z. Physiol. Chem. 364:1487-1496(1983).

[4]
 RP CHARACTERIZATION OF PROTEIN.
 RA MEDLINE=83256421; PubMed=6409085;
 RA Anascasti A., Brown M.A., Kemdhavi A.A., Nicklin M.J.H., Sayers C.A.,
 RA Suter D.C., Barrett A.J.;
 RT "Cystatin, a protein inhibitor of cysteine proteinases. Improved
 RT purification from egg white, characterization, and detection in
 RT chicken serum".
 RL Biochem. J. 211:129-138 (1983).
 RN [5]
 RP DISULFIDE BONDS.
 RA Grubb A., Loeffberg H., Barrett A.J.;
 RT "The disulphide bridges of human cystatin C (gamma-trace) and chicken
 RT cystatin".
 RL FEBS Lett. 170:370-374 (1984).
 RN [6]
 RP PHOSPHORYLATION.
 RA MEDLINE=89252033; PubMed=2721673;
 RA Lober B., Krieglstein K., Henschen A., Kos J., Turk V., Huber R.,
 RA Bode W.;
 RT "The cysteine proteinase inhibitor chicken cystatin is a
 RT phosphoprotein".
 RL FEBS Lett. 248:162-168 (1989).
 RN [7]
 RP X-RAY CRYSTALLOGRAPHY (2.0 ANGSTROMS).
 RX MEDLINE=89052676; PubMed=3191914;
 RA Bode W., Engh R., Musil D., Thiele U., Huber R., Karshikov A.,
 RA Brzin J., Kos J., Turk V.;
 RT "The 2.0 A X-ray crystal structure of chicken egg white cystatin and
 RT its possible mode of interaction with cysteine proteinases".
 RL EMBO J. 7:2593-2599 (1988).
 RN [8]
 RP STRUCTURE BY NMR.
 RX MEDLINE=94087719; PubMed=8263912;
 RA Dieckmann T., Mitschang L., Hofmann M., Kos J., Turk V.,
 RA Auerwald E.A., Jeanicke R., Oschkinat H.;
 RT "The structure of native phosphorylated chicken cystatin and of a
 RT recombinant unphosphorylated variant in solution".
 RL J. Mol. Biol. 234:1048-1059 (1993).
 CC -1- FUNCTION: This protein binds tightly to and inhibits a variety of
 CC chyl proteases including ficlin, papain, and cathepsins B, C, H,
 CC and L. Although isolated from egg white, it is also present in
 CC serum.
 CC -1- SIMILARITY: Belongs to the cystatin family.
 CC -----
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 CC -----
 CC EMBL: J05077; AAA48744.1; -.
 DR PIR: A34456; UDCB.
 DR PDB: 1CEW; 31-JUN-94.
 DR PDB: 1A67; 27-MAY-98.
 DR PDB: 1A90; 17-JUN-98.
 DR InterPro: IPR000010; Cystatin.
 DR Pfam: PF00031; cystatin; 1.
 DR SMART: SM00043; Cy: 1.
 DR PROSITE: PS00287; CYSTATIN; 1.
 KW Thiol protease inhibitor; Phosphorylation; Signal; 3D-structure.
 FT CHAIN 1 23
 FT ACT SITE 24 139 CYSTATIN.
 FT SITE 76 80 REACTIVE SITE.
 FT DISULFID 94 104 SECONDARY AREA OF CONTACT.
 FT MOD RES 118 138
 FT STRAND 35 36 PHOSPHORYLATION (PARTIAL).
 FT TURN 39 40
 FT HELIX 42 51

FT TURN 52 52
 FT HELIX 53 56
 FT TURN 57 58
 FT STRAND 63 77
 FT STRAND 81 95
 FT TURN 96 97
 FT TURN 99 100
 FT HELIX 101 108
 FT STRAND 115 125
 FT TURN 126 129
 FT STRAND 130 139
 SQ SEQUENCE 139 AA; 15287 MW; D92D1131C4D37891 CRC64;
 Query Match 30.64; Score 88; DB 1; Length 139;
 Best Local Similarity 42.54; Pred. No. 0.00028;
 Matches 17; Conservative 9; Mismatches 14; Indels 0; Gaps 0;
 Oy 1 KESDDKHFRIFFVLKVRQVTDHLEVHLNVEQMWTTCOK 40
 Db 57 RASNDKSSRVAVISAKRQLVSGIKYILQVEIGRTTCPK 96
 RESULT 14
 CYT_COTUA STANDARD; PRT; 116 AA.
 AC P81061;
 DT 15-JUL-1998 (Rel. 36, Created)
 DT 15-JUL-1998 (Rel. 36, Last sequence update)
 DT 28-FEB-2003 (Rel. 41, Last annotation update)
 DE Cystatin (Bgg-white cystatin).
 OS Coturnix coturnix japonica (Japanese quail).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
 OC Coturnix.
 OX NCBI_TaxID=93934;
 RN [1]
 RP SEQUENCE.
 RC TISSUE=Bgg white;
 RX MEDLINE=97420480; PubMed=9276465;
 RA Gerhartz B., Engh R.A., Mentele R., Eckerskorn C., Torquato R.,
 RA Wiltman J., Kolb H.J., Machleidt W., Fritz H., Auerwald E.A.;
 RT "Quail cystatin: isolation and characterization of a new member of
 RT the cystatin family and its hypothetical interaction with cathepsin
 RT B".
 RL FEBS Lett. 412:551-558 (1997).
 CC -1- FUNCTION: This protein binds tightly to and inhibits papain and
 CC cathepsin B.
 CC -1- SIMILARITY: Belongs to the cystatin family.
 CC -----
 CC HSSP: P01036; ICEW.
 DR InterPro: IPR000010; Cystatin.
 DR Pfam: PF00031; cystatin; 1.
 DR SMART: SM00043; Cy: 1.
 DR PROSITE: PS00287; CYSTATIN; 1.
 KW Thiol protease inhibitor; Phosphorylation.
 FT ACT SITE 9 9 REACTIVE SITE.
 FT SITE 53 57 SECONDARY AREA OF CONTACT.
 FT DISULFID 71 81
 FT DISULFID 95 115
 FT MOD RES 80 80 PHOSPHORYLATION.
 SQ SEQUENCE 116 AA; 13093 MW; 48248621053A2F70 CRC64;
 Query Match 29.24; Score 84; DB 1; Length 116;
 Best Local Similarity 37.54; Pred. No. 0.00076;
 Matches 15; Conservative 11; Mismatches 14; Indels 0; Gaps 0;
 Oy 1 KESDDKHFRIFFVLKVRQVTDHLEVHLNVEQMWTTCOK 40
 Db 34 RASNDKSSRVAVISAKRQLVSGIKYIMEVIGRTTCPK 73
 RESULT 15
 CYT_BITAR STANDARD; PRT; 111 AA.

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OM protein - protein search, using sw model

Run on: March 23, 2004, 17:05:48 ; Search time 27.8494 Seconds
(without alignments)
589.132 Million cell updates/sec

Title: US-09-941-314-14
Perfect score: 288
Sequence: 1 KESDDKXHFRIFFVLKVQRO.....MOWTTCOKPETTCVPOERE 52

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1017041 seqs, 315518202 residues
Total number of hits satisfying chosen parameters: 1017041

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database :
1: sp_archaea:*
2: sp_bacteria:*
3: sp_fungi:*
4: sp_human:*
5: sp_invertebrate:*
6: sp_mammal:*
7: sp_mhc:*
8: sp_organelle:*
9: sp_phage:*
10: sp_plant:*
11: sp_rodent:*
12: sp_virus:*
13: sp_vertebrate:*
14: sp_unclassified:*
15: sp_virus:*
16: sp_bacteria:*
17: sp_archaea:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	288	100.0	138	4 Q8WXU6	Q8WXU6 homo sapien
2	158	54.9	139	11 Q8K5A3	Q8K5A3 rattus norv
3	114	39.6	141	11 Q9DAP1	Q9DAP1 mus musculu
4	114	39.6	141	11 Q80ZNS	Q80ZNS mus musculu
5	104	36.1	103	4 Q8WXU5	Q8WXU5 homo sapien
6	97	33.7	140	11 Q9EXX9	Q9EXX9 mus musculu
7	86	29.9	112	13 Q98SR4	Q98SR4 acipenser s
8	86	29.9	112	13 Q98SR3	Q98SR3 acipenser s
9	77	26.7	425	3 Q12700	Q12700 debaromyce
10	76.5	26.6	109	5 Q9TYE5	Q9TYE5 onchocerca
11	75	26.0	148	5 Q9NH95	Q9NH95 litomosoid
12	74	25.7	161	5 Q16159	Q16159 bugtia mala
13	72	25.0	140	11 Q80T72	Q80T72 mus musculu
14	69.5	24.1	146	11 Q8K397	Q8K397 mus musculu
15	69.5	24.1	149	11 Q9D1B1	Q9D1B1 mus musculu
16	69	24.0	149	11 Q8VHC1	Q8VHC1 rattus norv

17	69	24.0	1779	5 Q18150	Q18150 caenorhabdi
18	66	22.9	125	5 Q25620	Q25620 onchocerca
19	65	22.6	133	5 Q8WYB6	Q8WYB6 ixodes scap
20	65	22.6	488	5 Q16454	Q16454 caenorhabdi
21	64	22.2	148	11 Q9JH84	Q9JH84 mus musculu
22	64	22.2	157	5 Q17108	Q17108 acanthochei
23	63	21.9	167	4 Q724J8	Q724J8 homo sapien
24	63	21.9	438	3 Q9URJ8	Q9URJ8 candida alb
25	62.5	21.7	144	13 Q8JFUS	Q8JFUS brachydanio
26	62.5	21.7	724	11 Q8WMD1	Q8WMD1 mus musculu
27	62	21.5	302	4 Q9H740	Q9H740 homo sapien
28	62	21.5	421	4 Q9NXS0	Q9NXS0 homo sapien
29	62	21.5	693	11 Q8K145	Q8K145 mus musculu
30	62	21.5	995	4 Q9HC18	Q9HC18 homo sapien
31	61.5	21.4	795	4 Q96DV1	Q96DV1 homo sapien
32	61	21.2	127	5 P90698	P90698 bugtia mala
33	61	21.2	284	16 Q88207	Q88207 lactobacill
34	61	21.2	400	13 Q8UVR3	Q8UVR3 xenopus lae
35	61	21.2	787	11 Q8B182	Q8B182 mus musculu
36	60	20.8	159	4 Q8TD53	Q8TD53 homo sapien
37	60	20.8	204	4 Q8TCY7	Q8TCY7 homo sapien
38	60	20.8	275	4 Q8WYG2	Q8WYG2 homo sapien
39	60	20.8	357	4 Q724J5	Q724J5 homo sapien
40	60	20.8	544	6 Q28548	Q28548 ovis aries
41	59.5	20.7	325	16 Q05502	Q05502 bacillus su
42	59	20.5	429	3 Q12628	Q12628 kluyveromyc
43	59	20.5	540	5 Q8T9G8	Q8T9G8 drosophila
44	59	20.5	966	5 Q8T9K4	Q8T9K4 drosophila
45	59	20.5	966	5 Q9VLM8	Q9VLM8 drosophila

ALIGNMENTS

RESULT 1

ID Q8WXU6 PRELIMINARY; PRT; 138 AA.
AC Q8WXU6;
DT 01-MAR-2002 (T-EMBLrel. 20, Created)
DT 01-MAR-2002 (T-EMBLrel. 20, Last sequence update)
DT 01-JUN-2003 (T-EMBLrel. 24, Last annotation update)
DE SC13.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Hominiidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A.
RA Hamil K.G., Liu Q., Zhang Y.-L., French P.S., Hall S.H.;
RT "SC13: A novel epididymal specific member of the cystatin family.";
RL Submitted (JAN-2001) to the EMBL/GenBank/DBJ databases.
DR EMBL; AF335480; ALU7191.1; -
DR GO; GO:0004869; F:cysteine protease inhibitor activity; IEA.
DR InterPro; IPR000010; Cystatin.
DR Pfam; PF00031; cystatin; 1.
DR SMART; SM00043; Cy; 1.
SQ SEQUENCE 138 AA; 16506 MW; E49440ACA3585C64 CRC64;

Query Match 100.0%; Score 288; DB 4; Length 138;
Best Local Similarity 100.0%; Pred. No. 2.5e-30;
Matches 52; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 KESDDKXHFRIFFVLKVQROVTHLEHNLAVEMQWTTCKPETTCVPOERE 52
Db 57 KESDDKXHFRIFFVLKVQROVTHLEHNLAVEMQWTTCKPETTCVPOERE 108

RESULT 2

ID Q8K5A3 PRELIMINARY; PRT; 139 AA.
AC Q8K5A3;
DT 01-OCT-2002 (T-EMBLrel. 22, Created)
DT 01-OCT-2002 (T-EMBLrel. 22, Last sequence update)

DT 01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
 DE Cystatin 11.
 GN CstII.
 OS Rattus norvegicus (Rat).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
 OX NCBI_TaxID=10116;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN=Sprague-Dawley;
 RA Hamil K.G., Hall S.H.;
 RL Submitted (APR-2002) to the EMBL/GenBank/DBJ databases.
 DR GO; GO:0004869; F:cysteine protease inhibitor activity; IEA.
 DR InterPro; IPR000010; Cystatin.
 DR Pfam; PF00031; Cystatin; 1.
 DR SMART; SM00043; CY; 1.
 SQ SEQUENCE 139 AA; 1668 MW; B1E36DB76B4D08C CRC64;
 QY Query Match 54.9%; Score 158; DB 11; Length 139;
 Best Local Similarity 53.8%; Pred. No. 4, 4e-13;
 Matches 28; Conservative 12; Mismatches 12; Indels 0; Gaps 0;
 Db 1 KESDDKTHFRIFRLVKQROVTDHLEVHLNVEWMTTCQK--PETTNCVPOE 52
 57 KKSIEDLYNFRILRIKLEKQNTNMEPHITVEMQRTCLTKKYLQNVQEGE 108
 RESULT 3
 Q9DAP1 PRELIMINARY; PRT; 141 AA.
 ID Q9DAP1
 AC Q9DAP1
 DT 01-JUN-2001 (TrEMBLrel. 17, Created)
 DT 01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
 DT 01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
 DE 1700006C19RIK protein.
 GN 1700006C19RIK.
 OS Mus musculus (Mouse).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
 OX NCBI_TaxID=10090;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN=C57BL/6J; TISSUE=Testis;
 RX MEDLINE=21085560; PubMed=11217851;
 RA Kawai J., Shingawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
 Atakawa T., Hara A., Fukunishi Y., Kono H., Adachi J., Fukuda S.,
 Alzawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamataka I.,
 Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,
 Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
 Fleischmann W., Gaasterland T., Gissi C., King B., Kochwa H.,
 Kuehl P., Lewis S., Matsuo Y., Nikaide I., Pesole G., Quackenbush J.,
 Schirml L.W., Staudli F., Suzuki R., Tomita M., Wagner L., Washio T.,
 Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
 Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
 Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
 Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
 Lyons P., Marchionni L., Mashima Y., Mazzarelli U., Mombaerts P.,
 Lyonne P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
 Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.F.,
 Suzuki H., Toyooka K., Wang K.H., Welter C., Whitaker C., Winking L.,
 Wyshaw-Boris A., Yoshida K., Haegawa Y., Kawaji H., Kohzuki S.,
 Hayashizaki Y.,
 RA "Functional annotation of a full-length mouse cDNA collection."
 RT Nature 409:585-590(2001).
 RL EMBL; AK005665; BAB24175.1; -.
 DR HSSP; P01038; ICEW.
 DR MGD; MGI:1916544; 1700006C19RIK.
 DR GO; GO:0004869; F:cysteine protease inhibitor activity; IEA.
 DR InterPro; IPR000010; Cystatin.
 DR Pfam; PF00031; Cystatin; 1.
 DR SMART; SM00043; CY; 1.
 SQ SEQUENCE 141 AA; 16811 MW; C20FA0DB8B1AC378C CRC64;

Query Match 39.6%; Score 114; DB 11; Length 141;
 Best Local Similarity 44.2%; Pred. No. 3, 1e-07;
 Matches 23; Conservative 11; Mismatches 16; Indels 2; Gaps 1;
 Db 1 KESDDKTHFRIFRLVKQROVTDHLEVHLNVEWMTTCQK--PETTNCVPOE 50
 57 KASNDLYNFRVVDILKSQEQITDSLEYVLEVNIAFTCKKXAGDNENCLFQQ 108
 RESULT 4
 Q80ZNS PRELIMINARY; PRT; 141 AA.
 ID Q80ZNS
 AC Q80ZNS
 DT 01-JUN-2003 (TrEMBLrel. 24, Created)
 DT 01-JUN-2003 (TrEMBLrel. 24, Last sequence update)
 DT 01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
 DE RIKEN cDNA 1700006C19 gene.
 OS Mus musculus (Mouse).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
 OX NCBI_TaxID=10090;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Testicle;
 RA Strauberg R.;
 RL Submitted (MAR-2003) to the EMBL/GenBank/DBJ databases.
 DR EMBL; BC048681; AAH48681.1; -.
 DR GO; GO:0004869; F:cysteine protease inhibitor activity; IEA.
 DR InterPro; IPR000010; Cystatin.
 DR Pfam; PF00031; Cystatin_C/M.
 DR Prodom; PD001231; Cystatin_C/M; 1.
 DR SMART; SM00043; CY; 1.
 SQ SEQUENCE 141 AA; 16825 MW; C20FA0DBA884951F CRC64;
 QY Query Match 39.6%; Score 114; DB 11; Length 141;
 Best Local Similarity 44.2%; Pred. No. 3, 1e-07;
 Matches 23; Conservative 11; Mismatches 16; Indels 2; Gaps 1;
 Db 1 KESDDKTHFRIFRLVKQROVTDHLEVHLNVEWMTTCQK--PETTNCVPOE 50
 57 KASNDLYNFRVVDILKSQEQITDSLEYVLEVNIAFTCKKXAGDNENCLFQQ 108
 RESULT 5
 Q8WXU5 PRELIMINARY; PRT; 103 AA.
 ID Q8WXU5
 AC Q8WXU5
 DT 01-MAR-2002 (TrEMBLrel. 20, Created)
 DT 01-MAR-2002 (TrEMBLrel. 20, Last sequence update)
 DT 01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
 DE SC13delta.
 OS Homo sapiens (Human).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Primates; Catarrhini; Homidae; Homo.
 OX NCBI_TaxID=9606;
 RN [1]
 RP SEQUENCE FROM N.A.
 RA Hamil K.G., Liu O., Zhang Y.-L., French F.S., Hall S.H.;
 RT "SC13: A novel epidiymal specific member of the cystatin family."
 RL Submitted (JAN-2001) to the EMBL/GenBank/DBJ databases.
 DR EMBL; AF35481; AAL71992.1; -.
 DR GO; GO:0004869; F:cysteine protease inhibitor activity; IEA.
 DR InterPro; IPR000010; Cystatin.
 DR Pfam; PF00031; Cystatin; 1.
 SQ SEQUENCE 103 AA; 12285 MW; 05DD92C47387B022 CRC64;
 QY Query Match 36.1%; Score 104; DB 4; Length 103;
 Best Local Similarity 100.0%; Pred. No. 4, 7e-06;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 Db 1 KESDDKTHFRIFRLVKQRO 20

Db 57 KESDDKXHFRIFFVLKQRO 76

RESULT 6

Q98PX9 PRELIMINARY; PRT; 140 AA.
 AC Q98PX9; 01-JUN-2001 (TrEMBLrel. 16, Created)
 DT 01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
 DT 01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
 DE Cystatin C.
 OS Mus musculus (Mouse).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
 OX NCBI_TaxID=10090;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN=BALB/C;
 RX MEDLINE=21010502; PubMed=1114350;
 RA Taupin F.J., Ray J., Fischer W.H., Suhr S.T., Hakanson K., Grubb A.,
 Gage F.H.;
 RT "FGF-2-Responsive neural stem cell proliferation requires CCG, a novel
 RT autocrine/paracrine cofactor.";
 RL Neuron 28:385-397(2000).
 DR EMBL; AF311741; AAC40283.1; -.
 DR HSSP; P01034; I996.
 DR GO; GO:0004869; F:cysteine protease inhibitor activity; IEA.
 DR InterPro; IPR000010; Cystatin.
 DR Pfam; PF00031; cystatin; 1.
 DR SMART; SM00043; CY: 1.
 DR PROSITE; PS00287; CYSTATIN; 1.
 FT CHAIN 21 140 CYSTATIN C.
 FT VARIANT 16 16 A -> G.
 FT VARIANT 84 84 L -> F.
 SQ SEQUENCE 140 AA; 15517 MW; 3A563406D58D785 CRC64;

Query Match 33.7%; Score 97; DB 11; Length 140;
 Best Local Similarity 41.7%; Pred. No. 5.5e-05;
 Matches 20; Conservative 11; Mismatches 15; Indels 2; Gaps 1;

QY 1 KESDDKXHFRIFFVLKQROVTDHLEVLNVMQMTTCOKPET--TNC 46
 Db 56 KGSNDAYHSAIQVVARAKQVLVAGVNFLEVMERTTCTYSQNTLTC 103

RESULT 7
 Q98SR4 PRELIMINARY; PRT; 112 AA.
 AC Q98SR4; 01-JUN-2001 (TrEMBLrel. 17, Created)
 DT 01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
 DT 01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
 DE Cystatin (Fragment).
 OS Acipenser sinensis (Chinese sturgeon).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Actinopterygii; Chondrostei; Acipenseriformes; Acipenseridae;
 OC Acipenser.
 OX NCBI_TaxID=61970;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Liver;
 RA Bai J., Lao H., Ye X., Li Y., Lou J.;
 RT "Molecular cloning and sequence analysis of cystatin cDNA from two
 RT species of sturgeons.";
 RL Submitted (JAN-2001) to the EMBL/GenBank/DBJ databases.
 DE EMBL; AF334610; AAK16731.1; -.
 DR HSSP; P01038; I990.
 DR GO; GO:0004869; F:cysteine protease inhibitor activity; IEA.
 DR InterPro; IPR000010; Cystatin.
 DR Pfam; PF00031; cystatin; 1.
 DR SMART; SM00043; CY: 1.
 DR PROSITE; PS00287; CYSTATIN; 1.

FT NON TER 1 1
 SQ SEQUENCE 112 AA; 12231 MW; 48ECBFBED8A08C00 CRC64;

Query Match 29.9%; Score 86; DB 13; Length 112;
 Best Local Similarity 42.5%; Pred. No. 0.0013;
 Matches 17; Conservative 11; Mismatches 12; Indels 0; Gaps 0;

QY 1 KESDDKXHFRIFFVLKQROVTDHLEVLNVMQMTTCOK 40
 Db 29 KASNDWYIHRSVKVQKQVAGIKYIVTVQMGRTSCRK 68

RESULT 8

Q98SR3 PRELIMINARY; PRT; 112 AA.
 AC Q98SR3; 01-JUN-2001 (TrEMBLrel. 17, Created)
 DT 01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
 DT 01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
 DE Cystatin (Fragment).
 OS Acipenser schrenckii (Amar sturgeon).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Actinopterygii; Chondrostei; Acipenseriformes; Acipenseridae;
 OC Acipenser.
 OX NCBI_TaxID=111304;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Liver;
 RA Bai J., Lao H., Ye X., Li Y., Lou J.;
 RT "Molecular cloning and sequence analysis of cystatin cDNA from two
 RT species of sturgeons.";
 RL Submitted (JAN-2001) to the EMBL/GenBank/DBJ databases.
 DE EMBL; AF334611; AAK16732.1; -.
 DR HSSP; P01038; I990.
 DR GO; GO:0004869; F:cysteine protease inhibitor activity; IEA.
 DR InterPro; IPR000010; Cystatin.
 DR Pfam; PF00031; cystatin; 1.
 DR PROSITE; PS00287; CYSTATIN; 1.
 FT NON TER 1 1
 SQ SEQUENCE 112 AA; 12231 MW; 48ECBFBED8A08C00 CRC64;

Query Match 29.9%; Score 86; DB 13; Length 112;
 Best Local Similarity 42.5%; Pred. No. 0.0013;
 Matches 17; Conservative 11; Mismatches 12; Indels 0; Gaps 0;

QY 1 KESDDKXHFRIFFVLKQROVTDHLEVLNVMQMTTCOK 40
 Db 29 KASNDWYIHRSVKVQKQVAGIKYIVTVQMGRTSCRK 68

RESULT 9
 Q12700 PRELIMINARY; PRT; 425 AA.
 AC Q12700; 01-NOV-1996 (TrEMBLrel. 01, Created)
 DT 01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
 DT 01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
 DE Exo-1,3-beta-glucanase/1,3-beta-D-glucan glucanohydrolase
 (EC 3.2.1.58).
 OS Debaryomyces occidentalis (Yeast) (Schwanniomyces occidentalis).
 OC Eukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetes;
 OC Saccharomycetales; Saccharomycetaceae; Debaryomyces.
 OX NCBI_TaxID=27300;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN=ATCC 26077;
 RX MEDLINE=99154256; PubMed=10029988;
 RA Betebean P., del Rey F., Vazquez De Aldana C.R.;
 RT "Cloning and characterization of 1,3-beta-glucanase-encoding genes
 RT from non-conventional yeasts.";
 RL Yeast 15:91-109(1999).
 DR EMBL; Z46871; CAA86951.1; -.
 DR HSSP; P29717; 1CZ1.

DR GO:0004338; F:glucan 1,3-beta-glucosidase activity; IEA.
 DR GO:0004553; F:hydrolase activity, hydrolyzing O-glycosyl . . .; IEA.
 DR GO:0005975; P:carbohydrate metabolism; IEA.
 DR InterPro: IPR001547; Glyco hydro_5.
 DR PROSITE: PS00659; GLYCOSYL_HYDROL_F5; 1.
 KW Glycosidase; Hydrolase.
 SQ SEQUENCE 425 AA; 49127 MW; 57F063ABE2FBF274 CRC64;

Query Match 26.7%; Score 77; DB 3; Length 425;
 Best Local Similarity 27.8%; Pred. No. 0.077;
 Matches 15; Conservative 11; Mismatches 12; Indels 16; Gaps 2;

Qy 5 DKYHFRIFRVLYKQROVTDHLEHYLVNEMQWTTCCQKPTTNC 46
 Db 277 DHHYGVFSAGELQRSIDHITVAQWGMGDAKKEVHNVAGWNSAA----LTDC 326

RESULT 10
 Q9TY65 PRELIMINARY; PRT; 109 AA.

AC Q9TY65; 01-MAY-2000 (TrEMBLrel. 13, Created)
 DT 01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
 DT 01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
 DE Antigen maltose binding protein (Fragment).
 OS Onchocerca volvulus.
 OC Eukaryota; Metazoa; Nematoda; Chromadorea; Spirurida; Filarioidea;
 OC Onchocercidae; Onchocerca.
 NCBI_TaxID=6282;

RA "Heterogeneity of IgG antibody responses to cloned Onchocerca volvulus
 antigens in microfilaria positive individuals from Esmeraldas
 Province, Ecuador."
 RT Parasite Immunol. 16:201-209(1994).
 RL EMBL: S71364; AAC60509.1; -
 DR GO:0004869; F:cysteine protease inhibitor activity; IEA.
 DR InterPro: IPR000010; Cystatin.
 DR Pfam: PF00031; cystatin; 1.
 DR SMART; SM00043; CY; 1.
 DR PROSITE; PS00287; CYSTATIN; 1.

FT NON TER 1
 SO SEQUENCE 109 AA; 12701 MW; 3C6B5EF14D8082B8 CRC64;

Query Match 26.6%; Score 76.5; DB 5; Length 109;
 Best Local Similarity 29.4%; Pred. No. 0.022;
 Matches 15; Conservative 15; Mismatches 16; Indels 5; Gaps 1;

Qy 1 KESDDKYHFRIFRVLYKQROVTDHLEHYLVNEMQWTTCCQKPTTNC 46
 Db 25 EQSNDYHLMPIKLVSSQVAGVKYKMDVQVARSCKSSNKKVLTVC 75

RESULT 11
 Q9NH95 PRELIMINARY; PRT; 148 AA.

AC Q9NH95; 01-OCT-2000 (TrEMBLrel. 15, Created)
 DT 01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
 DT 01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
 DE Le-cystatin.
 OS Litomosoides sigmodontis.
 OC Eukaryota; Metazoa; Nematoda; Chromadorea; Spirurida; Filarioidea;
 OC Onchocercidae; Litomosoides.
 NCBI_TaxID=42156;

RA "Sequence from N.A.
 Pfaff A.W., Hoffmann W.H., Taylor D.W., Schulz-Kay H.;
 Characterization and immunological properties of a cysteine protease
 inhibitor of the filarial parasite Litomosoides sigmodontis.";

RL Submitted (JAN-2000) to the EMBL/GenBank/DBJ databases.
 DR EMBL: AF229173; AAF35896.1; -
 DR GO:0004869; F:cysteine protease inhibitor activity; IEA.
 DR InterPro: IPR000010; Cystatin.
 DR Pfam: PF00031; cystatin; 1.
 DR SMART; SM00043; CY; 1.
 DR PROSITE; PS00287; CYSTATIN; 1.
 KW Cystatin (Mouse).
 SQ SEQUENCE 148 AA; 16686 MW; 2950A89CA5339C9 CRC64;

Query Match 26.0%; Score 75; DB 5; Length 148;
 Best Local Similarity 32.5%; Pred. No. 0.048;
 Matches 13; Conservative 12; Mismatches 15; Indels 0; Gaps 0;

Qy 1 KESDDKYHFRIFRVLYKQROVTDHLEHYLVNEMQWTTCCQK 40
 Db 63 QQSNDYHLMPIKLVSSQVAGVKYKMDVQVARSCKK 102

RESULT 12
 O16159 PRELIMINARY; PRT; 161 AA.

AC O16159; 01-JAN-1998 (TrEMBLrel. 05, Created)
 DT 01-JAN-1998 (TrEMBLrel. 05, Last sequence update)
 DT 01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
 DE Cystatin-type cysteine proteinase inhibitor.
 GN BM-CPI-2.
 OS Brugia malayi (Filarial nematode worm).
 OC Eukaryota; Metazoa; Nematoda; Chromadorea; Spirurida; Filarioidea;
 OC Onchocercidae; Brugia.
 NCBI_TaxID=6279;

RA "Sequence from N.A.
 Gregory W.F., Blaxter M.L., Maizels R.M.;
 Submitted (JUL-1997) to the EMBL/GenBank/DBJ databases.
 RL [2]

RT "Two distinct cystatin-type cysteine protease inhibitors from the
 parasitic nematode Brugia malayi."
 RT Submitted (AUG-1999) to the EMBL/GenBank/DBJ databases.
 RL EMBL: AF015263; AAB69857.1; -
 DR EMBL; AF017193; AAD51086.1; -
 DR GO:0004869; F:cysteine protease inhibitor activity; IEA.
 DR InterPro: IPR000010; Cystatin.
 DR Pfam: PF00031; cystatin; 1.
 DR SMART; SM00043; CY; 1.
 DR PROSITE; PS00287; CYSTATIN; 1.

SO SEQUENCE 161 AA; 18406 MW; 8081351EBE226EB5 CRC64;

Query Match 25.7%; Score 74; DB 5; Length 161;
 Best Local Similarity 32.5%; Pred. No. 0.071;
 Matches 13; Conservative 13; Mismatches 14; Indels 0; Gaps 0;

Qy 1 KESDDKYHFRIFRVLYKQROVTDHLEHYLVNEMQWTTCCQK 40
 Db 74 QQSNDYHLMPIKLVSSQVAGVKYKMDVQVARSCKK 113

RESULT 13
 Q80Y72 PRELIMINARY; PRT; 140 AA.

AC Q80Y72; 01-JUN-2003 (TrEMBLrel. 24, Created)
 DT 01-JUN-2003 (TrEMBLrel. 24, Last sequence update)
 DT 01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
 DE Cystatin-like 1.
 OS Mus musculus (Mouse).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.

NCBI_TaxID=10090;
 RN [1]

RP SEQUENCE FROM N.A.
RC TISSUE=Testicle;
RA Strauberg R.L., Fingold E.A., Grouse L.H., Derge J.G.,
RA Klausner R.D., Collins F.S., Wagner L., Shennan C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Heish F.,
RA Diatchenko L., Mansina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stepieton M., Soares M.B., Bonaldo M.F., Casavant T.L., Schetz T.E.,
RA Brownstein W.J., Ueda T.B., Toshiyuki S., Carninci P., Prange C.,
RA Rana S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullaly S.J.,
RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Vallat D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Rahay J., Helton E., Kettman M., Madan A., Rodriguez S., Sanchez A.,
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Blakeley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,
RA Krzyzanski M.I., Skalska U., Smallus D.E., Scherch A., Schein J.E.,
RA Jones S.J., Marra M.A.;
RT "generation and initial analysis of more than 15,000 full-length human
RT and mouse cDNA sequences."
RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN [2]
RP SEQUENCE FROM N.A.
RC TISSUE=Testicle;
RA Strauberg R.;
RL Submitted (MAR-2003) to the EMBL/GenBank/DBJ databases.
DR EMBL, BC048646; AAH48646.1; -
DR GO, GO:0004869; F:cysteine protease inhibitor activity; IEA.
DR Interpro: IPR000010; Cystatin.
DR Interpro: IPR003243; Cystatin_C/M.
DR Pfam: PF00031; Cystatin; 1.
DR ProDom: PD001231; Cystatin_C/M; 1.
DR SMART, SM00043; CY; 1.
SQ SEQUENCE 140 AA; 16199 MW; 32633899C4697D80 CRC64;
Qy
Db 3 SDDKHFRRFVRLVKQRQVTDHLEHNLNEMQTTCKP 43
59 SDDTYLVQVQKLTGCGWQLTGVGVYTVKIGRTCKKNER 99
Query Match 25.0%; Score 72; DB 11; Length 140;
Best Local Similarity 34.1%; Pred. No. 0.11;
Matches 14; Conservative 14; Mismatches 13; Indels 0; Gaps 0;
RESULT 14
Q8K397 PRELIMINARY; PRT; 146 AA.
AC 08K397;
DT 01-OCT-2002 (TrEMBLrel. 22, Created)
DT 01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
DE 01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DE RIKEN cDNA 1110017B11 gene (Fragment).
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=Mammary gland;
RA Strauberg R.;
RL Submitted (APR-2002) to the EMBL/GenBank/DBJ databases.
DR EMBL, BC027680; AAH27680.1; -
DR GO, GO:0004869; F:cysteine protease inhibitor activity; IEA.
DR Interpro: IPR000010; Cystatin.
DR Pfam: PF00031; Cystatin; 1.
DR SMART, SM00043; CY; 1.
FT NON TER 1
SQ SEQUENCE 146 AA; 16380 MW; 9D77BB9A6063A5C4 CRC64;
Query Match 24.1%; Score 69.5; DB 11; Length 146;
Best Local Similarity 27.5%; Pred. No. 0.25;

Matches 14; Conservative 14; Mismatches 16; Indels 7; Gaps 1;
Qy
Db 3 SDDKHFRRFVRLVKQRQVTDHLEHNLNEMQTTCKP-----ETTCG 46
60 SDSLTYFRDTKVIDAKQVLVAGIKYLLTDISTECKTRVSGEHMDLTTTC 110
RESULT 15
Q9D1B1 PRELIMINARY; PRT; 149 AA.
AC 09D1B1;
DT 01-JUN-2001 (TrEMBLrel. 17, Created)
DT 01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
DT 01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DE 1110017E1IRK protein (Cystatin M/E) (Cystatin N homolog).
GN 1110017E1IRK OR CST6.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=C57BL/6J; TISSUE=Embryo;
RX MEDLINE=21085660; PubMed=11217851;
RA Kawai J., Shingawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
RA Arakawa T., Hara A., Fukunishi Y., Kono H., Adachi J., Fukuda S.,
RA Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamana K.,
RA Saito T., Okazaki Y., Gojobori T., Bono H., Kasubawa T., Saito R.,
RA Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
RA Pleischmann W., Gaasterland T., Gissi C., King B., Kochwa H.,
RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pebole G., Quackenbush J.,
RA Schirml L.M., Staudli P., Suzuki R., Tomita M., Wagner L., Washio T.,
RA Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barh G.,
RA Blake J., Boiffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
RA Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
RA Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
RA Lyons P., Marchionni L., Mashima J., Mazzarelli J., Monbaerts P.,
RA Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
RA Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
RA Suzuki H., Toyooka K., Wang K.H., Weltz C., Whitaker C., Wilming L.,
RA Wyshak-Boris A., Yoshida K., Hasegawa Y., Kawai H., Kohsaki S.,
RA Hayashizaki Y.;
RT "Functional annotation of a full-length mouse cDNA collection."
RL Nature 409:685-690(2001).
RN [2]
RP SEQUENCE FROM N.A.
RC STRAIN=129SvEvTac; TISSUE=Spleen;
RA Zeeuwen P.L.J.M., van Vlijmen-Willems I.M.J.J., Hendriks W.,
RA Merks G.F., Schalkwijk J.;
RT Submitted (MAR-2002) to the EMBL/GenBank/DBJ databases.
RN [3]
RP SEQUENCE FROM N.A.
RC STRAIN=C57BL/6J; TISSUE=Medulla oblongata;
RX MEDLINE=22354683; PubMed=12466851;
RA The PANTOM Consortium.
RA The RIKEN Genome Exploration Research Group Phase I & II Team;
RT "Analysis of the mouse transcriptome based on functional annotation of
RT 60,770 full-length cDNAs."
RL Nature 420:563-573(2002).
DR EMBL, AK003744; BAB22976.1; -
DR EMBL, AK078116; BAC37132.1; -
DR HSSP, P01038; ICEW.
DR MGP, MGI:1920970; Cst6.
DR GO, GO:0001533; C:cornified envelope; IEA.
DR GO, GO:0008544; P:epidermal differentiation; IMP.
DR Interpro: IPR000010; Cystatin.
DR Pfam: PF00031; Cystatin; 1.
SQ SEQUENCE 149 AA; 16796 MW; E713BB920B0EFC5 CRC64;
Query Match 24.1%; Score 69.5; DB 11; Length 149;
Best Local Similarity 27.5%; Pred. No. 0.26;

Wed Mar 24 09:21:09 2004

us-09-941-314-14.rsp

Page 6

Matches 14; Conservative 14; Mismatches 16; Indels 7; Gaps 1;

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      || : || : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db      63  S D S L Y F R D T K V I D A K Q V L A G I K Y L T L D I E S T E C R K T R V S G E H M D L T T C 113

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Search completed: March 23, 2004, 17:13:30
Job time : 31.8494 secs

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: March 23, 2004, 17:04:13 ; Search time 63.9331 Seconds
(without alignments)
353.554 Million cell updates/sec

Title: US-09-941-314-15

Perfect score: 446

Sequence: 1 QVNEKSDDKXHFRIIFRYLKV.....NCFPSVPAVWPFOYKLINK 80

Scoring table: BLOSUM62

Searched: Gapop 10.0 , Gapext 0.5

Total number of hits satisfying chosen parameters: 1586107

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Database :

A_Geneseq_29Jan04:*
1: geneseqp1980s:*
2: geneseqp1980s:*
3: geneseqp2000s:*
4: geneseqp2001s:*
5: geneseqp2002s:*
6: geneseqp2003as:*
7: geneseqp2003bs:*
8: geneseqp2004s:*

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	446	100.0	80	5	AAU79865 Human cys
2	446	100.0	115	5	AAU79853 Human cys
3	446	100.0	117	5	AAU79854 Human cys
4	446	100.0	137	5	AAU79852 Human cys
5	334	74.9	59	5	AAU79866 Human cys
6	288	64.6	52	5	AAU79864 Human cys
7	273	61.2	48	5	AAU79867 Human cys
8	266	59.6	49	5	AAU79863 Human cys
9	254	57.0	46	5	AAU79860 Human cys
10	199.5	44.7	142	4	AAE02404 Murine cy
11	199.5	44.7	142	4	AAE04433 Mouse spe
12	199.5	44.7	143	6	ADA14374 Human cys
13	189	42.4	33	5	AAU79862 Human cys
14	187.5	42.0	142	7	ADD46708 Rat Prote
15	187.5	42.0	142	7	ADD46704 Rat Prote
16	174.5	39.1	92	2	AAW78259 Fragment
17	174.5	39.1	123	2	AAW78258 Fragment
18	174.5	39.1	142	2	AAW78258 Fragment
19	174.5	39.1	142	4	AAE02405 Human cys
20	174.5	39.1	142	4	AAE04434 Human cys
21	174.5	39.1	142	6	ADA57231 Human sec
22	174.5	39.1	142	6	ADA41112 Human sec
23	174.5	39.1	142	7	ADD37980 Human sec
24	174.5	39.1	142	7	ADD37980 Human sec
25	174.5	39.1	142	7	ADD46706 Human Pro

26	174.5	39.1	142	7	ADD46710 Human Pro
27	169.5	38.0	141	3	AAV96576 Murine cy
28	169.5	38.0	141	4	AAE02403 Murine cy
29	169.5	38.0	141	4	AAE04432 Mouse tes
30	158	35.4	145	4	AAE04315 Alternati
31	158	35.4	145	5	AAU76555 Human Zcy
32	158	35.4	145	6	ABG75917 Human cys
33	156.5	35.1	116	3	AAV81210 Egg white
34	155.5	34.9	116	3	AAV81203 Egg white
35	155.5	34.9	116	3	AAV81212 Egg white
36	154.5	34.6	116	3	AAV81204 Egg white
37	154.5	34.6	116	3	AAV81140 Egg white
38	154.5	34.6	139	2	AAE25342 Chicken e
39	154.5	34.6	139	2	AAE25342 Chicken e
40	152.5	34.2	116	3	AAV81205 Egg white
41	152	34.1	145	4	AAE04323 Human Zcy
42	152	34.1	145	4	AAE04887 Human pro
43	152	34.1	145	5	AAU76578 Human Zcy
44	152	34.1	145	6	ABG75925 Human cys
45	151.5	34.0	120	3	AAV81149 Human mut

ALIGNMENTS

RESULT 1
AAU79865 standard; peptide; 80 AA.
XX
AC AAU79865;
XX
DT 15-JUL-2002 (first entry)
XX
DE Human cystatin-8 (Zcy8) antigenic fragment #13.
XX
KM Cystatin-8; Zcy8; cancer; procoagulant protein; thrombosis;
KM spermatogenesis; seminal fluid viscosity; cryopreserved sperm;
KM sperm motility; fertilisation; antigenic peptide.
XX
OS Homo sapiens.
XX
PN W0200220567-A2.
XX
PD 14-MAR-2002.
XX
PF 29-AUG-2001; 2001MO-US026868.
XX
PR 01-SEP-2000; 2000US-0230230P.
XX
PA (ZYMO) ZYMOGENETICS INC.
XX
PI Holloway JL, Gao Z, Bishop PD;
XX
DR WPI; 2002-383044/41.
XX
PT Novel isolated mammalian cystatin-8 polypeptide useful for promoting
PT spermatogenesis, and inhibiting cancer procoagulant protein which leads
PT to inhibition of thrombotic events associated with cancer.
XX
PS Claim 2; Page 98; 100pp; English.
XX
CC The invention describes an isolated mammalian cystatin-8 (Zcy8)
CC polypeptide (I). (I) is useful for: inhibiting cancer procoagulant
CC protein in an individual and thus inhibiting the thrombotic events
CC associated with cancer; promoting spermatogenesis, modulating seminal
CC fluid viscosity, enhancing viability of cryopreserved sperm, sperm
CC motility and fertilisation; and as antigenic peptides to generate
CC antibodies. Zcy8 is useful as research reagent for characterising sites
CC of interaction between Zcy8 and its receptor. Zcy8 is useful in
CC enhancing fertilisation during assisted reproduction in humans and in
CC animals. Anti-(I) antibodies are useful to screen biological samples like
CC blood, urine, saliva, tissue biopsy and autopsy material in vitro for the
CC presence of Zcy8. The antibodies are also useful to isolate large

quantities of Zcys8 protein and DNA sequences that encode Zcys8 genes.
 The polynucleotide encoding (1) is useful to detect and to localise the expression of a Zcys8 gene in a biological sample and Zcys8 oligonucleotide probes are useful for in vivo diagnosis. The polynucleotide encoding (1) is useful in determining whether a subject's chromosomes contain a mutation in the Zcys8 gene like aneuploidy, gene copy number changes, insertions, deletions, restriction site changes and rearrangements and genetic alterations that inactivate the Zcys8 gene. This sequence represents an antigenic peptide of human cystatin-8 (Zcys8)

Sequence 80 AA;

Query Match 100.0%; Score 446; DB 5; Length 80;
 Best Local Similarity 100.0%; Pred. No. 6.8e-46;
 Matches 80; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 QYNKESDDKXHFRIFRVLKQROVTDHLEHNLNEMQWTTCKQKPTTNCVQERELHKOV 60
 DB 1 QYNKESDDKXHFRIFRVLKQROVTDHLEHNLNEMQWTTCKQKPTTNCVQERELHKOV 60

QY 61 NCFPSVFAVPWFPEQYKILNK 80
 DB 61 NCFPSVFAVPWFPEQYKILNK 80

RESULT 2

AAU79853 ID AAU79853 standard; protein; 115 AA.

AAU79853;

15-JUL-2002 (first entry)

Human cystatin-8 (Zcys8) antigenic fragment #1.

Cystatin-8; Zcys8; cancer; procoagulant protein; thrombosis;
 spermatogenesis; seminal fluid viscosity; cryopreserved sperm;
 sperm motility; fertilisation; antigenic fragment.

Homo sapiens.

WO200220567-A2.

14-MAR-2002.

29-AUG-2001; 2001WO-US026868.

01-SEP-2000; 2000US-0230230P.

(ZYMO) ZYMOGENETICS INC.

Holloway JL, Gao Z, Bishop PD;

WPI; 2002-383044/41.

Novel isolated mammalian cystatin-8 polypeptide useful for promoting spermatoogenesis, and inhibiting cancer procoagulant protein which leads to inhibition of thrombotic events associated with cancer.

Claim 2; Page 94; 100pp; English.

The invention describes an isolated mammalian cystatin-8 (Zcys8) polypeptide (1). (1) is useful for: inhibiting cancer procoagulant protein in an individual and thus inhibiting the thrombotic events associated with cancer; promoting spermatoogenesis, modulating seminal fluid viscosity, enhancing viability of cryopreserved sperm, sperm motility and fertilisation; and as antigenic peptides to generate antibodies. Zcys8 is useful as research reagent for characterising sites of interaction between Zcys8 and its receptor. Zcys8 is useful in enhancing fertilisation during assisted reproduction in humans and in animals. Anti-(1) antibodies are useful to screen biological samples like blood, urine, saliva, tissue biopsy and autopsy material in vitro for the presence of Zcys8. The antibodies are also useful to isolate large

quantities of Zcys8 protein and DNA sequences that encode Zcys8 genes.
 The polynucleotide encoding (1) is useful to detect and to localise the expression of a Zcys8 gene in a biological sample and Zcys8 oligonucleotide probes are useful for in vivo diagnosis. The polynucleotide encoding (1) is useful in determining whether a subject's chromosomes contain a mutation in the Zcys8 gene like aneuploidy, gene copy number changes, insertions, deletions, restriction site changes and rearrangements and genetic alterations that inactivate the Zcys8 gene. This sequence represents an antigenic fragment of human cystatin-8 (Zcys8)

Sequence 115 AA;

Query Match 100.0%; Score 446; DB 5; Length 115;
 Best Local Similarity 100.0%; Pred. No. 1e-45;
 Matches 80; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 QYNKESDDKXHFRIFRVLKQROVTDHLEHNLNEMQWTTCKQKPTTNCVQERELHKOV 60
 DB 31 QYNKESDDKXHFRIFRVLKQROVTDHLEHNLNEMQWTTCKQKPTTNCVQERELHKOV 90

QY 61 NCFPSVFAVPWFPEQYKILNK 80
 DB 91 NCFPSVFAVPWFPEQYKILNK 110

RESULT 3

AAU79854 ID AAU79854 standard; protein; 117 AA.

AAU79854;

15-JUL-2002 (first entry)

Human cystatin-8 (Zcys8) antigenic fragment #2.

Cystatin-8; Zcys8; cancer; procoagulant protein; thrombosis;
 spermatogenesis; seminal fluid viscosity; cryopreserved sperm;
 sperm motility; fertilisation; antigenic fragment.

Homo sapiens.

WO200220567-A2.

14-MAR-2002.

29-AUG-2001; 2001WO-US026868.

01-SEP-2000; 2000US-0230230P.

(ZYMO) ZYMOGENETICS INC.

Holloway JL, Gao Z, Bishop PD;

WPI; 2002-383044/41.

Novel isolated mammalian cystatin-8 polypeptide useful for promoting spermatoogenesis, and inhibiting cancer procoagulant protein which leads to inhibition of thrombotic events associated with cancer.

Claim 2; Page 94-95; 100pp; English.

The invention describes an isolated mammalian cystatin-8 (Zcys8) polypeptide (1). (1) is useful for: inhibiting cancer procoagulant protein in an individual and thus inhibiting the thrombotic events associated with cancer; promoting spermatoogenesis, modulating seminal fluid viscosity, enhancing viability of cryopreserved sperm, sperm motility and fertilisation; and as antigenic peptides to generate antibodies. Zcys8 is useful as research reagent for characterising sites of interaction between Zcys8 and its receptor. Zcys8 is useful in enhancing fertilisation during assisted reproduction in humans and in animals. Anti-(1) antibodies are useful to screen biological samples like blood, urine, saliva, tissue biopsy and autopsy material in vitro for the

CC presence of Zcy88. The antibodies are also useful to isolate large
CC quantities of Zcy88 protein and DNA sequences that encode Zcy88 genes.
CC The polynucleotide encoding (I) is useful to detect and to localise the
CC expression of a Zcy88 gene in a biological sample and Zcy88
CC oligonucleotide probes are useful for in vivo diagnosis. The
CC polynucleotide encoding (I) is useful in determining whether a subject's
CC chromosomes contain a mutation in the Zcy88 gene like aneuploidy, gene
CC copy number changes, insertions, deletions, restriction site changes and
CC rearrangements and genetic alterations that inactivate the Zcy88 gene.
CC This sequence represents an antigenic fragment of human cystatin-8
CC (Zcy88)

SQ Sequence 117 AA;

Query Match 100.0%; Score 446; DB 5; Length 117;
Best Local Similarity 100.0%; Pred. No. 1.1e-45;
Matches 80; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 QYNKESDDKXHFRIFRVLKXQROVTDHLEYNLVEMQWTCQKPEETNCVPOREHLKQV 60
DB 33 QYNKESDDKXHFRIFRVLKXQROVTDHLEYNLVEMQWTCQKPEETNCVPOREHLKQV 92
QY 61 NCFPSVFAVPWFQYKILNK 80
DB 93 NCFPSVFAVPWFQYKILNK 112

RESULT 4

AAU79852
ID AAU79852 standard; protein; 137 AA.

AC AAU79852;

DT 15-JUL-2002 (first entry)
DE Human cystatin-8 (Zcy88).

XX Cystatin-8; Zcy88; cancer; procoagulant protein; thrombosis;
KM spermatogenesis; seminal fluid viscosity; cryopreserved sperm;
KW sperm motility; fertilisation.

OS Homo sapiens.

XX WO200220567-A2.

XX 14-MAR-2002.

XX 29-AUG-2001; 2001WO-US026868.

XX 01-SEP-2000; 2000US-0230230P.

XX (ZYMO) ZYMOGENETICS INC.

XX Holloway JL, Gao Z, Bishop PD;

XX WPI; 2002-383044/41.

XX N-PDB; ABK49522.

PT Novel isolated mammalian cystatin-8 polypeptide useful for promoting
PT spermatogenesis, and inhibiting cancer procoagulant protein which leads
PT to inhibition of thrombotic events associated with cancer.

PS Claim 2; Page 93-94; 100pp; English.

CC The invention describes an isolated mammalian cystatin-8 (Zcy88)
CC polypeptide (I). (I) is useful for: inhibiting cancer procoagulant
CC protein in an individual and thus inhibiting the thrombotic events
CC associated with cancer; promoting spermatogenesis, modulating seminal
CC fluid viscosity, enhancing viability of cryopreserved sperm, sperm
CC motility and fertilisation; and as antigenic peptides to generate
CC antibodies. Zcy88 is useful as research reagent for characterising sites
CC of interaction between Zcy88 and its receptor. Zcy88 is useful in
CC enhancing fertilisation during assisted reproduction in humans and in

CC animals. Anti-(I) antibodies are useful to screen biological samples like
CC blood, urine, saliva, tissue biopsy and autopsy material in vitro for the
CC presence of Zcy88. The antibodies are also useful to isolate large
CC quantities of Zcy88 protein and DNA sequences that encode Zcy88 genes.
CC The polynucleotide encoding (I) is useful to detect and to localise the
CC expression of a Zcy88 gene in a biological sample and Zcy88
CC oligonucleotide probes are useful for in vivo diagnosis. The
CC polynucleotide encoding (I) is useful in determining whether a subject's
CC chromosomes contain a mutation in the Zcy88 gene like aneuploidy, gene
CC copy number changes, insertions, deletions, restriction site changes and
CC rearrangements and genetic alterations that inactivate the Zcy88 gene.
CC This is the amino acid sequence of human cystatin-8 (Zcy88)

SQ Sequence 137 AA;

Query Match 100.0%; Score 446; DB 5; Length 137;
Best Local Similarity 100.0%; Pred. No. 1.3e-45;
Matches 80; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 QYNKESDDKXHFRIFRVLKXQROVTDHLEYNLVEMQWTCQKPEETNCVPOREHLKQV 60
DB 53 QYNKESDDKXHFRIFRVLKXQROVTDHLEYNLVEMQWTCQKPEETNCVPOREHLKQV 112
QY 61 NCFPSVFAVPWFQYKILNK 80
DB 113 NCFPSVFAVPWFQYKILNK 132

RESULT 5

AAU79866
ID AAU79866 standard; peptide; 59 AA.

AC AAU79866;

DT 15-JUL-2002 (first entry)
DE Human cystatin-8 (Zcy88) antigenic fragment #14.

XX Cystatin-8; Zcy88; cancer; procoagulant protein; thrombosis;
KM spermatogenesis; seminal fluid viscosity; cryopreserved sperm;
KW sperm motility; fertilisation; antigenic peptide.

OS Homo sapiens.

XX WO200220567-A2.

XX 14-MAR-2002.

XX 29-AUG-2001; 2001WO-US026868.

XX 01-SEP-2000; 2000US-0230230P.

XX (ZYMO) ZYMOGENETICS INC.

XX Holloway JL, Gao Z, Bishop PD;

XX WPI; 2002-383044/41.

PT Novel isolated mammalian cystatin-8 polypeptide useful for promoting
PT spermatogenesis, and inhibiting cancer procoagulant protein which leads
PT to inhibition of thrombotic events associated with cancer.

PS Claim 2; Page 99; 100pp; English.

CC The invention describes an isolated mammalian cystatin-8 (Zcy88)
CC polypeptide (I). (I) is useful for: inhibiting cancer procoagulant
CC protein in an individual and thus inhibiting the thrombotic events
CC associated with cancer; promoting spermatogenesis, modulating seminal
CC fluid viscosity, enhancing viability of cryopreserved sperm, sperm
CC motility and fertilisation; and as antigenic peptides to generate
CC antibodies. Zcy88 is useful as research reagent for characterising sites
CC of interaction between Zcy88 and its receptor. Zcy88 is useful in
CC enhancing fertilisation during assisted reproduction in humans and in

CC animals. Anti-(I) antibodies are useful to screen biological samples like
 CC blood, urine, saliva, tissue biopsy and autopsy material in vitro for the
 CC presence of Zcy8. The antibodies are also useful to isolate large
 CC quantities of Zcy8 protein and DNA sequences that encode Zcy8 genes.
 CC The polynucleotide encoding (I) is useful to detect and to localise the
 CC expression of a Zcy8 gene in a biological sample and Zcy8
 CC oligonucleotide probes are useful for in vivo diagnosis. The
 CC polynucleotide encoding (I) is useful in determining whether a subject's
 CC chromosomes contain a mutation in the Zcy8 gene like aneuploidy, gene
 CC copy number changes, insertions, deletions, restriction site changes and
 CC rearrangements and genetic alterations that inactivate the Zcy8 gene.
 CC This sequence represents an antigenic peptide of human cystatin-8 (Zcy8)
 CC
 SQ Sequence 59 AA;

Query Match 74.9%; Score 334; DB 5; Length 59;
 Best Local Similarity 100.0%; Pred. No. 1,4e-32;
 Matches 59; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 RQVTDHLEHNLVNMQWTTCKPPTNCVPOERELHKNVCFVFAVPMFEQYKINK 80
 DB 1 RQVTDHLEHNLVNMQWTTCKPPTNCVPOERELHKNVCFVFAVPMFEQYKINK 59

RESULT 6
 ID AAU79864 standard; peptide; 52 AA.
 AC AAU79864;

DT 15-JUL-2002 (first entry)
 DE Human cystatin-8 (Zcy8) antigenic fragment #12.

KM Cystatin-8; Zcy8; cancer, procoagulant protein; thrombosis;
 KM spermatogenesis; seminal fluid viscosity; cryopreserved sperm;
 KM sperm motility; fertilisation; antigenic peptide.

OS Homo sapiens.

XX WO200220567-A2.

XX 14-MAR-2002.

XX 29-AUG-2001; 2001WO-US026868.

XX 01-SEP-2000; 2000US-0230230P.

XX (ZYMO) ZYMOGENETICS INC.

PI Holloway JL, Gao Z, Bishop PD;

DR WPI; 2002-383044/41.

PT Novel isolated mammalian cystatin-8 polypeptide useful for promoting
 PT spermatogenesis, and inhibiting cancer procoagulant protein which leads
 PT to inhibition of thrombotic events associated with cancer.

PS Claim 2; Page 98; 100pp; English.

XX The invention describes an isolated mammalian cystatin-8 (Zcy8)
 CC polypeptide (I). (I) is useful for: inhibiting cancer procoagulant
 CC protein in an individual and thus inhibiting the thrombotic events
 CC associated with cancer; promoting spermatogenesis, modulating seminal
 CC fluid viscosity, enhancing viability of cryopreserved sperm, sperm
 CC motility and fertilisation; and as antigenic peptides to generate
 CC antibodies. Zcy8 is useful as research reagent for characterising sites
 CC of interaction between Zcy8 and its receptor. Zcy8 is useful in
 CC enhancing fertilisation during assisted reproduction in humans and in
 CC animals. Anti-(I) antibodies are useful to screen biological samples like
 CC blood, urine, saliva, tissue biopsy and autopsy material in vitro for the
 CC presence of Zcy8. The antibodies are also useful to isolate large
 CC quantities of Zcy8 protein and DNA sequences that encode Zcy8 genes.

CC The polynucleotide encoding (I) is useful to detect and to localise the
 CC expression of a Zcy8 gene in a biological sample and Zcy8
 CC oligonucleotide probes are useful for in vivo diagnosis. The
 CC polynucleotide encoding (I) is useful in determining whether a subject's
 CC chromosomes contain a mutation in the Zcy8 gene like aneuploidy, gene
 CC copy number changes, insertions, deletions, restriction site changes and
 CC rearrangements and genetic alterations that inactivate the Zcy8 gene.
 CC This sequence represents an antigenic peptide of human cystatin-8 (Zcy8)
 CC
 SQ Sequence 52 AA;

Query Match 64.6%; Score 288; DB 5; Length 52;
 Best Local Similarity 100.0%; Pred. No. 4,3e-27;
 Matches 52; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 4 KESDDKXHFRIFFVLKVRQVTDHLEHNLVNMQWTTCKPPTNCVPOERE 55
 DB 1 KESDDKXHFRIFFVLKVRQVTDHLEHNLVNMQWTTCKPPTNCVPOERE 52

RESULT 7
 ID AAU79867 standard; peptide; 48 AA.
 AC AAU79867;

DT 15-JUL-2002 (first entry)

DE Human cystatin-8 (Zcy8) antigenic fragment #15.

KM Cystatin-8; Zcy8; cancer, procoagulant protein; thrombosis;
 KM spermatogenesis; seminal fluid viscosity; cryopreserved sperm;
 KM sperm motility; fertilisation; antigenic peptide.

OS Homo sapiens.

XX WO200220567-A2.

XX 14-MAR-2002.

XX 29-AUG-2001; 2001WO-US026868.

XX 01-SEP-2000; 2000US-0230230P.

XX (ZYMO) ZYMOGENETICS INC.

PI Holloway JL, Gao Z, Bishop PD;

DR WPI; 2002-383044/41.

PT Novel isolated mammalian cystatin-8 polypeptide useful for promoting
 PT spermatogenesis, and inhibiting cancer procoagulant protein which leads
 PT to inhibition of thrombotic events associated with cancer.

PS Claim 2; Page 99; 100pp; English.

XX The invention describes an isolated mammalian cystatin-8 (Zcy8)
 CC polypeptide (I). (I) is useful for: inhibiting cancer procoagulant
 CC protein in an individual and thus inhibiting the thrombotic events
 CC associated with cancer; promoting spermatogenesis, modulating seminal
 CC fluid viscosity, enhancing viability of cryopreserved sperm, sperm
 CC motility and fertilisation; and as antigenic peptides to generate
 CC antibodies. Zcy8 is useful as research reagent for characterising sites
 CC of interaction between Zcy8 and its receptor. Zcy8 is useful in
 CC enhancing fertilisation during assisted reproduction in humans and in
 CC animals. Anti-(I) antibodies are useful to screen biological samples like
 CC blood, urine, saliva, tissue biopsy and autopsy material in vitro for the
 CC presence of Zcy8. The antibodies are also useful to isolate large
 CC quantities of Zcy8 protein and DNA sequences that encode Zcy8 genes.
 CC The polynucleotide encoding (I) is useful to detect and to localise the
 CC expression of a Zcy8 gene in a biological sample and Zcy8
 CC oligonucleotide probes are useful for in vivo diagnosis. The
 CC polynucleotide encoding (I) is useful in determining whether a subject's

CC chromosomes contain a mutation in the Zcys8 gene like aneuploidy, gene
CC copy number changes, insertions, deletions, restriction site changes and
CC rearrangements and genetic alterations that inactivate the Zcys8 gene.
CC This sequence represents an antigenic peptide of human cystatin-8 (Zcys8)
XX
SQ Sequence 48 AA;

Query Match 61.2%; Score 273; DB 5; Length 48;
Best Local Similarity 100.0%; Pred. No. 2.5e-25;
Matches 48; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 33 NVEWMTTCCKPFTTNCVPERELHKQVNCFFSVFAVPWFQYKILNK 80
DB 1 NVEWMTTCCKPFTTNCVPERELHKQVNCFFSVFAVPWFQYKILNK 48

RESULT 8
AAU79863
ID AAU79863 standard; peptide; 49 AA.

AC AAU79863;
XX
DT 15-JUL-2002 (first entry)
XX

DE Human cystatin-8 (Zcys8) antigenic fragment #11.

XX Cystatin-8; Zcys8; cancer; procoagulant protein; thrombosis;
KW spermatogenesis; seminal fluid viscosity; cryopreserved sperm;
KM sperm motility; fertilisation; antigenic peptide.
XX

OS Homo sapiens.

XX WO200220567-A2.

XX 14-MAR-2002.

XX 29-AUG-2001; 2001WO-US026868.

XX 01-SEP-2000; 2000US-0230230P.

XX (ZYMO) ZYMOGENETICS INC.

XX Holloway JL, Gao Z, Bishop PD;

XX WPI; 2002-383044/41.

PT Novel isolated mammalian cystatin-8 polypeptide useful for promoting
PT spermatogenesis, and inhibiting cancer procoagulant protein which leads
PT to inhibition of thrombotic events associated with cancer.
XX

PS Claim 2; Page 97-98; 100pp; English.

XX The invention describes an isolated mammalian cystatin-8 (Zcys8)
CC polypeptide (I). (I) is useful for: inhibiting cancer procoagulant
CC protein in an individual and thus inhibiting the thrombotic events
CC associated with cancer; promoting spermatogenesis, modulating seminal
CC fluid viscosity, enhancing viability of cryopreserved sperm, sperm
CC motility and fertilisation; and as antigenic peptides to generate
CC antibodies. Zcys8 is useful as research reagent for characterising sites
CC of interaction between Zcys8 and its receptor. Zcys8 is useful in
CC enhancing fertilisation during assisted reproduction in humans and in
CC animals. Anti-(I) antibodies are useful to screen biological samples like
CC blood, urine, saliva, tissue biopsy and autopsy material in vitro for the
CC presence of Zcys8. The antibodies are also useful to isolate large
CC quantities of Zcys8 protein and DNA sequences that encode Zcys8 genes.
CC The polynucleotide encoding (I) is useful to detect and to localise the
CC expression of a Zcys8 gene in a biological sample and Zcys8
CC oligonucleotide probes are useful for in vivo diagnosis. The
CC polynucleotide encoding (I) is useful in determining whether a subject's
CC chromosomes contain a mutation in the Zcys8 gene like aneuploidy, gene
CC copy number changes, insertions, deletions, restriction site changes and
CC rearrangements and genetic alterations that inactivate the Zcys8 gene.
CC This sequence represents an antigenic peptide of human cystatin-8 (Zcys8)

XX
SQ Sequence 49 AA;

Query Match 59.6%; Score 266; DB 5; Length 49;
Best Local Similarity 100.0%; Pred. No. 1.8e-24;
Matches 48; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 QYNKESDDKXHPRIIPVLKXVROVTDHLBYHNVWMTTCCKPFTTN 48
DB 2 QYNKESDDKXHPRIIPVLKXVROVTDHLBYHNVWMTTCCKPFTTN 49

RESULT 9
AAU79860
ID AAU79860 standard; peptide; 46 AA.

AC AAU79860;

DT 15-JUL-2002 (first entry)

DE Human cystatin-8 (Zcys8) antigenic fragment #8.

XX Cystatin-8; Zcys8; cancer; procoagulant protein; thrombosis;
KW spermatogenesis; seminal fluid viscosity; cryopreserved sperm;
KM sperm motility; fertilisation; antigenic peptide.
XX

OS Homo sapiens.

XX WO200220567-A2.

XX 14-MAR-2002.

XX 29-AUG-2001; 2001WO-US026868.

XX 01-SEP-2000; 2000US-0230230P.

XX (ZYMO) ZYMOGENETICS INC.

XX Holloway JL, Gao Z, Bishop PD;

XX WPI; 2002-383044/41.

PT Novel isolated mammalian cystatin-8 polypeptide useful for promoting
PT spermatogenesis, and inhibiting cancer procoagulant protein which leads
PT to inhibition of thrombotic events associated with cancer.
XX

PS Claim 2; Page 97; 100pp; English.

XX The invention describes an isolated mammalian cystatin-8 (Zcys8)
CC polypeptide (I). (I) is useful for: inhibiting cancer procoagulant
CC protein in an individual and thus inhibiting the thrombotic events
CC associated with cancer; promoting spermatogenesis, modulating seminal
CC fluid viscosity, enhancing viability of cryopreserved sperm, sperm
CC motility and fertilisation; and as antigenic peptides to generate
CC antibodies. Zcys8 is useful as research reagent for characterising sites
CC of interaction between Zcys8 and its receptor. Zcys8 is useful in
CC enhancing fertilisation during assisted reproduction in humans and in
CC animals. Anti-(I) antibodies are useful to screen biological samples like
CC blood, urine, saliva, tissue biopsy and autopsy material in vitro for the
CC presence of Zcys8. The antibodies are also useful to isolate large
CC quantities of Zcys8 protein and DNA sequences that encode Zcys8 genes.
CC The polynucleotide encoding (I) is useful to detect and to localise the
CC expression of a Zcys8 gene in a biological sample and Zcys8
CC oligonucleotide probes are useful for in vivo diagnosis. The
CC polynucleotide encoding (I) is useful in determining whether a subject's
CC chromosomes contain a mutation in the Zcys8 gene like aneuploidy, gene
CC copy number changes, insertions, deletions, restriction site changes and
CC rearrangements and genetic alterations that inactivate the Zcys8 gene.
CC This sequence represents an antigenic peptide of human cystatin-8 (Zcys8)
XX
SQ Sequence 46 AA;

Query Match 57.0%; Score 254; DB 5; Length 46;

Best Local Similarity 100.0%; Pred. No. 4.6e-23;
Matches 46; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 3 NKESDDKYHFRIFRVLVKQROVTDHLEHNLNVEWMTTCCKPEPTN 48
DB 1 NKESDDKYHFRIFRVLVKQROVTDHLEHNLNVEWMTTCCKPEPTN 46

RESULT 10

ID AAE02404 standard; protein; 142 AA.

AC AAE02404;

DT 10-AUG-2001 (first entry)

DE Murine cystatin-related epididymal specific protein (CRES).

KM Murine; cystatin T; zcyg3; cystatin-related epididymal specific protein;
KM CRES; inhibitor; cysteine proteinase; male reproductive tissue; testis;
KM spermatogenesis; therapy; reproductive disorder.

XX Mus musculus.

XX US6235708-B1.

PD 22-MAY-2001.

PF 01-NOV-1999; 99US-00431480.

XX 20-NOV-1998; 98US-0109217P.

PR 28-SEP-1999; 99US-0156382P.

XX (ZYMO) ZYMOGENETICS INC.

PI Holloway JL, Feldhaus AL;

DR WPI; 2001-342846/36.

PT Cystatin T polypeptides are useful for modulating spermatogenesis and
PT studying, diagnosing and treating reproductive disorders.

XX Disclosure; Col 45-46; 32pp; English.

XX The present invention relates to cystatin T (also known as zcyg3) DNA and
CC protein sequences. Cystatin T is testis specific and is homologous to
CC cystatin-related epididymal specific gene (CRES) and type 2 cystatins.

CC Cystatin inhibit cysteine proteinases and are found with male
CC reproductive tissues and secretions. Cystatin T sequence is useful for
CC modulating spermatogenesis and studying, diagnosing and treating
CC reproductive disorders. The present sequence is murine cystatin-related
CC epididymal specific (CRES) protein

XX Sequence 142 AA;

QY Query Match 44.7%; Score 199.5; DB 4; Length 142;
Best Local Similarity 42.2%; Pred. No. 6.6e-16;

Matches 35; Conservative 25; Mismatches 20; Indels 3; Gaps 2;

QY 1 QYNKESDDKYHFRIFRVLVKQROVTDHLEHNLNVEWMTTCCKP--ETTNCVQGR-ELH 57
DB 55 EYNKESDDKYHFRIFRVLVKQROVTDHLEHNLNVEWMTTCCKP--ETTNCVQGR-ELH 57

QY 58 KOVNCFSFVAVPWFPEOYKILNK 80
DB 115 KKMSCSFVGVGLPWNGBFNLSK 137

RESULT 11

ID AAE04433 standard; protein; 142 AA.

AC AAE04433;

DT 06-NOV-2003 (first entry)

DE Mouse spermatogenesis related protein sequence SEQ ID NO:116.

KM mouse; spermatogenesis; gene cluster; mutagenicity;
KM reproductive toxicity; reproductive capacity; mutation;

XX ADAL4374

XX ADAL4374;

XX 06-NOV-2003 (first entry)

XX Mouse spermatogenesis related protein sequence SEQ ID NO:116.

XX mouse; spermatogenesis; gene cluster; mutagenicity;
XX reproductive toxicity; reproductive capacity; mutation;

XX 04-SEP-2001 (first entry)

DT Mouse cystatin-related epididymal specific (CRES) protein.

XX Mouse; cystatin T; zcyg3; testis specific; spermatogenesis modulator;
KM cystatin-related epididymal specific gene; CRES; gene therapy;
KM sperm production; antifertility.

XX Mus musculus.

XX US6245529-B1.

PD 12-JUN-2001.

PF 17-JUL-2000; 2000US-00617302.

XX 20-NOV-1998; 98US-0109217P.

PR 28-SEP-1999; 99US-0156382P.

PR 01-NOV-1999; 99US-00431480.

XX (ZYMO) ZYMOGENETICS INC.

PI Holloway JL, Feldhaus AL;

DR WPI; 2001-407271/43.

PT New polynucleotides encoding testis-specific cystatin-like protein
PT cystatin T, useful in gene therapy for modulating cystatin T activity,
PT particularly for modulating spermatogenesis, or enhancing sperm
PT production or fertility.

XX Disclosure; Col 47-48; 33pp; English.

XX The present sequence is mouse cystatin-related epididymal specific (CRES)
CC protein which is homologous to mouse testis specific cystatin T (also
CC known as zcyg3). The cystatin T polynucleotide is useful in gene therapy
CC applications, where it is desired to increase or inhibit cystatin T
CC activity. It is also useful for producing cystatin T polypeptide, as well
CC as for detecting the expression of a cystatin T gene in a biological
CC sample. The cystatin T is useful for modulating spermatogenesis, and may
CC be used to study or modulate that function in vitro or in vivo
CC systems. In particular, it is also useful for enhancing sperm production,
CC increasing the number of viable sperm in a sample, or enhancing
CC fertilisation

XX Sequence 142 AA;

QY Query Match 44.7%; Score 199.5; DB 4; Length 142;
Best Local Similarity 42.2%; Pred. No. 6.6e-16;

Matches 35; Conservative 25; Mismatches 20; Indels 3; Gaps 2;

QY 1 QYNKESDDKYHFRIFRVLVKQROVTDHLEHNLNVEWMTTCCKP--ETTNCVQGR-ELH 57
DB 55 EYNKESDDKYHFRIFRVLVKQROVTDHLEHNLNVEWMTTCCKP--ETTNCVQGR-ELH 57

QY 58 KOVNCFSFVAVPWFPEOYKILNK 80
DB 115 KKMSCSFVGVGLPWNGBFNLSK 137

RESULT 12

ID ADAL4374 standard; protein; 143 AA.

AC ADAL4374;

DT 06-NOV-2003 (first entry)

DE Mouse spermatogenesis related protein sequence SEQ ID NO:116.

KM mouse; spermatogenesis; gene cluster; mutagenicity;
KM reproductive toxicity; reproductive capacity; mutation;

XX ADAL4374

XX ADAL4374;

XX 06-NOV-2003 (first entry)

XX Mouse spermatogenesis related protein sequence SEQ ID NO:116.

XX mouse; spermatogenesis; gene cluster; mutagenicity;
XX reproductive toxicity; reproductive capacity; mutation;

XX ADAL4374

XX ADAL4374;

XX 06-NOV-2003 (first entry)

XX Mouse spermatogenesis related protein sequence SEQ ID NO:116.

XX mouse; spermatogenesis; gene cluster; mutagenicity;
XX reproductive toxicity; reproductive capacity; mutation;

[illegible]

XX	AAU79862	standard; peptide; 33 AA.
XX	AAU79862;	
XX	15-JUL-2002	(first entry)
XX	Human cystatin-8 (Zcys8)	antigenic fragment #10.
XX	Cystatin-8; Zcys8;	cancer; procoagulant protein; thrombosis;
KW	spermatogenesis;	seminal fluid viscosity; cryopreserved sperm;
KW	sperm motility;	fertilisation; antigenic peptide.
XX	Homo sapiens.	
OS	WO200220567-A2.	
XX	14-MAR-2002.	
XX	29-AUG-2001;	2001WO-US026868.
PF	01-SEP-2000;	2000US-0230230P.
PR	(ZYMO)	ZYMOGENETICS INC.
PA	Holloway JL,	Gao Z, Bishop PD;
PI	WPI; 2002-383044/41.	
XX	Novel isolated mammalian cystatin-8 polypeptide	useful for promoting
XX	spermatogenesis,	and inhibiting cancer procoagulant protein which leads
PT	to inhibition of thrombotic events	associated with cancer.
PS	Claim 2;	Page 97; 100p; English.
XX	The invention describes an isolated mammalian cystatin-8 (Zcys8)	
CC	polypeptide (1). (1) is useful for: inhibiting cancer procoagulant	
CC	protein in an individual and thus inhibiting the thrombotic events	
CC	associated with cancer; promoting spermatogenesis, modulating seminal	
CC	fluid viscosity, enhancing viability of cryopreserved sperm, sperm	
CC	motility and fertilisation; and as antigenic peptides to generate	
CC	antibodies. Zcys8 is useful as research reagent for characterising sites	
CC	of interaction between Zcys8 and its receptor. Zcys8 is useful in	
CC	enhancing fertilisation during assisted reproduction in humans and in	
CC	animals. Anti-(1) antibodies are useful to screen biological samples like	
CC	blood, urine, saliva, tissue biopsy and autopsy material in vitro for the	
CC	presence of Zcys8. The antibodies are also useful to isolate large	
CC	quantities of Zcys8 protein and DNA sequences that encode Zcys8 genes.	
CC	The polynucleotide encoding (1) is useful to detect and to localise the	
CC	expression of a Zcys8 gene in a biological sample and Zcys8	
CC	oligonucleotide probes are useful for in vivo diagnosis. The	
CC	polynucleotide encoding (1) is useful in determining whether a subject's	
CC	chromosomes contain a mutation in the Zcys8 gene like aneuploidy, gene	
CC	copy number changes, insertions, deletions, restriction site changes and	
CC	rearrangements and genetic alterations that inactivate the Zcys8 gene.	
CC	This sequence represents an antigenic peptide of human cystatin-8 (Zcys8)	
XX	Sequence 33 AA;	
XX	Seq	
Query Match	42.4%;	Score 189; DB 5; Length 33;
Best Local Similarity	100.0%;	Pred. No. 2,1e-15;
Matches 33;	Conservative 0;	Mismatches 0; Indels 0; Gaps 0;
23	QVTDHLETHLVNEMQMTTCQKPEPTTNCVPOBRE	55
Db	1 QVTDHLETHLVNEMQMTTCQKPEPTTNCVPOBRE	33

ID ADD46708 standard; protein; 142 AA.
XX
XX ADD46708;
XX
XX 29-JAN-2004 (first entry)
DT
XX
XX Rat Protein AAC36317, SEQ ID NO 12393.
DE
XX
XX Rat; pain; neuronal tissue; gene therapy; spinal segmental nerve injury;
KM chronic constriction injury; CCI; spared nerve injury; SNI; Chung.
XX
XX Rattus norvegicus.
OS
XX
XX W02003016475-A2.
PN
XX
XX 27-FEB-2003.
PD
XX
XX 14-AUG-2002; 2002MO-US025765.
PF
XX
XX 14-AUG-2001; 2001US-0312147P.
PR 01-NOV-2001; 2001US-0346382P.
PR 26-NOV-2001; 2001US-0333347P.
XX
XX (GEHO) GEN HOSPITAL CORP.
PA (FARB) BAYER AG.
PI
XX
XX Woolf C, D'urso D, Befort K, Costigan M;
PI WPI; 2003-268312/26.
DR
XX
XX GENBANK; AAC36317.
DR
XX
XX New composition comprising two or more isolated polypeptides, useful for
PT preparing a medicament for treating pain in an animal.
PT
XX
XX Claim 1; Page; 1017bp; English.
PS
XX
XX The invention discloses a composition comprising two or more isolated rat
CC or human polynucleotides or a polynucleotide which represents a fragment,
CC derivative or allelic variation of the nucleic acid sequence. Also
CC claimed are a vector comprising the novel polynucleotide, a host cell
CC comprising the vector, a method for identifying a nucleotide sequence
CC which is differentially regulated in an animal subjected to pain and a
CC kit to perform the method, an array, a method for identifying an agent
CC that increases or decreases the expression of the polynucleotide sequence
CC subjected to pain, a method for identifying a compound which regulates
CC the expression of a polynucleotide sequence which is differentially
CC expressed in an animal subjected to pain, a method for identifying a
CC compound that regulates the activity of one or more of the
CC polynucleotides, a method for producing a pharmaceutical composition, a
CC method for identifying a compound or small molecule that regulates the
CC activity in an animal of one or more of the polypeptides given in the
CC specification, a method for identifying a compound useful in treating
CC pain and a pharmaceutical composition comprising the one or more
CC polypeptides or their antibodies. The polynucleotide or the compound that
CC modulates its activity is useful for preparing a medicament for treating
CC pain (e.g. spinal segmental nerve injury (SNI)) in an animal (e.g. gene
CC injury (CCI) and spared nerve injury (Chung), chronic constriction
CC therapy). The sequence presented is a rat protein (shown in Table 2 of
CC the specification) which is differentially expressed during pain. Note:
CC The sequence data for this patent did not form part of the printed
CC specification, but was obtained in electronic form directly from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences.
XX
XX Sequence 142 AA;
SQ

Query Match 42.0%; Score 187.5; DB 7; Length 142;
Best Local Similarity 41.0%; Pred. No. 1.8e-14;
Matches 34; Conservative 23; Mismatches 23; Indels 3; Gaps 2;
1 QYNKESDXYKHFRLPVLYKQVOTDHLHYLNTNEMQTTQKQ--ETTNVCPQPER-ELH 57
55 EYNGSEDKYLLDLDKTLHATLQITDRMEYHIDVQISRSNCRKPLANTENCIPQKPKLE 114

QY 58 KQVNCFSYPAVWPFGQYKILNK 80
Db 115 KKLSCSFLVGALPMNGEFDLISK 137
RESULT 15
ADD46704
ID ADD46704 standard; protein; 142 AA.
XX
XX ADD46704;
AC
XX
XX 29-JAN-2004 (first entry)
DT
XX
XX Rat Protein AAC36317, SEQ ID NO 12393.
DE
XX
XX Rat; pain; neuronal tissue; gene therapy; spinal segmental nerve injury;
KM chronic constriction injury; CCI; spared nerve injury; SNI; Chung.
XX
XX Rattus norvegicus.
OS
XX
XX W02003016475-A2.
PN
XX
XX 27-FEB-2003.
PD
XX
XX 14-AUG-2002; 2002MO-US025765.
PF
XX
XX 14-AUG-2001; 2001US-0312147P.
PR 01-NOV-2001; 2001US-0346382P.
PR 26-NOV-2001; 2001US-0333347P.
XX
XX (GEHO) GEN HOSPITAL CORP.
PA (FARB) BAYER AG.
PI
XX
XX Woolf C, D'urso D, Befort K, Costigan M;
PI WPI; 2003-268312/26.
DR
XX
XX GENBANK; AAC36317.
DR
XX
XX New composition comprising two or more isolated polypeptides, useful for
PT preparing a medicament for treating pain in an animal.
PT
XX
XX Claim 1; Page; 1017bp; English.
PS
XX
XX The invention discloses a composition comprising two or more isolated rat
CC or human polynucleotides or a polynucleotide which represents a fragment,
CC derivative or allelic variation of the nucleic acid sequence. Also
CC claimed are a vector comprising the novel polynucleotide, a host cell
CC comprising the vector, a method for identifying a nucleotide sequence
CC which is differentially regulated in an animal subjected to pain and a
CC kit to perform the method, an array, a method for identifying an agent
CC that increases or decreases the expression of the polynucleotide sequence
CC subjected to pain, a method for identifying a compound which regulates
CC the expression of a polynucleotide sequence which is differentially
CC expressed in an animal subjected to pain, a method for identifying a
CC compound that regulates the activity of one or more of the
CC polynucleotides, a method for producing a pharmaceutical composition, a
CC method for identifying a compound or small molecule that regulates the
CC activity in an animal of one or more of the polypeptides given in the
CC specification, a method for identifying a compound useful in treating
CC pain and a pharmaceutical composition comprising the one or more
CC polypeptides or their antibodies. The polynucleotide or the compound that
CC modulates its activity is useful for preparing a medicament for treating
CC pain (e.g. spinal segmental nerve injury (SNI)) in an animal (e.g. gene
CC injury (CCI) and spared nerve injury (SNI)) in an animal (e.g. gene
CC therapy). The sequence presented is a rat protein (shown in Table 2 of
CC the specification) which is differentially expressed during pain. Note:
CC The sequence data for this patent did not form part of the printed
CC specification, but was obtained in electronic form directly from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences.
XX
XX Sequence 142 AA;
SQ

PRIOR FILING DATE: 1998-11-20
PRIOR APPLICATION NUMBER: 60/156,382
PRIOR FILING DATE: 1999-09-28
NUMBER OF SEQ ID NOS: 22
SOFTWARE: FastSeq for Windows Version 3.0
SEQ ID NO 3
LENGTH: 142
TYPE: PRT
ORGANISM: Mus musculus
US-09-617-302-3

Query Match 44.7%; Score 199.5; DB 3; Length 142;
Best Local Similarity 42.2%; Pred. No. 2e-18;
Matches 35; Conservative 25; Mismatches 20; Indels 3; Gaps 2;

QY 1 QYNKESDQKXFRFRVLAKVQROYTDHLEHIANVEMQTTQCKPRTN--CVPER-ELH 57
DB 55 EYNKESDQKXFRFRVLAKVQROYTDHLEHIANVEMQTTQCKPRTN--CVPER-ELH 114
QY 58 KQVNCPSVFAVPMPEQYKILNK 80
DB 115 KKLSCSFLVGLPMPNGEFTWMEK 137

RESULT 3
US-09-431-480-4
Sequence 4, Application US/09431480
Patent No. 6235708
GENERAL INFORMATION:
APPLICANT: Hollaway, James L.
APPLICANT: Feldhaus, Andrew
TITLE OF INVENTION: TESTIS SPECIFIC CYSTATIN-LIKE PROTEIN CYSTATIN T
FILE REFERENCE: 98-72
CURRENT APPLICATION NUMBER: US/09/431,480
CURRENT FILING DATE: 1999-11-01
EARLIER APPLICATION NUMBER: 60/109,217
EARLIER FILING DATE: 1998-11-20
EARLIER APPLICATION NUMBER: 60/156,382
EARLIER FILING DATE: 1999-09-28
NUMBER OF SEQ ID NOS: 22
SOFTWARE: FastSeq for Windows Version 3.0
SEQ ID NO 4
LENGTH: 142
TYPE: PRT
ORGANISM: Homo sapiens
US-09-431-480-4

Query Match 39.1%; Score 174.5; DB 3; Length 142;
Best Local Similarity 42.2%; Pred. No. 3.8e-15;
Matches 35; Conservative 22; Mismatches 23; Indels 3; Gaps 2;

QY 1 QYNKESDQKXFRFRVLAKVQROYTDHLEHIANVEMQTTQCKPRTN--CVPER-ELH 57
DB 55 EYNKESDQKXFRFRVLAKVQROYTDHLEHIANVEMQTTQCKPRTN--CVPER-ELH 114
QY 58 KQVNCPSVFAVPMPEQYKILNK 80
DB 115 KKLSCSFLVGLPMPNGEFTWMEK 137

RESULT 4
US-09-617-302-4
Sequence 4, Application US/09617302
Patent No. 6245529
GENERAL INFORMATION:
APPLICANT: Hollaway, James L.
APPLICANT: Feldhaus, Andrew
TITLE OF INVENTION: TESTIS SPECIFIC CYSTATIN-LIKE PROTEIN CYSTATIN T
FILE REFERENCE: 98-72 C1
CURRENT APPLICATION NUMBER: US/09/617,302
CURRENT FILING DATE: 2000-07-17
PRIOR APPLICATION NUMBER: 09/431,480
PRIOR FILING DATE: 1999-11-01

PRIOR APPLICATION NUMBER: 60/109,217
PRIOR FILING DATE: 1998-11-20
PRIOR APPLICATION NUMBER: 60/156,382
PRIOR FILING DATE: 1999-09-28
NUMBER OF SEQ ID NOS: 22
SOFTWARE: FastSeq for Windows Version 3.0
SEQ ID NO 4
LENGTH: 142
TYPE: PRT
ORGANISM: Homo sapiens
US-09-617-302-4

Query Match 39.1%; Score 174.5; DB 3; Length 142;
Best Local Similarity 42.2%; Pred. No. 1.7e-14;
Matches 35; Conservative 22; Mismatches 23; Indels 3; Gaps 2;

QY 1 QYNKESDQKXFRFRVLAKVQROYTDHLEHIANVEMQTTQCKPRTN--CVPER-ELH 57
DB 55 EYNKESDQKXFRFRVLAKVQROYTDHLEHIANVEMQTTQCKPRTN--CVPER-ELH 114
QY 58 KQVNCPSVFAVPMPEQYKILNK 80
DB 115 KKLSCSFLVGLPMPNGEFTWMEK 137

RESULT 5
US-09-431-480-2
Sequence 2, Application US/09431480
Patent No. 6235708
GENERAL INFORMATION:
APPLICANT: Hollaway, James L.
APPLICANT: Feldhaus, Andrew
TITLE OF INVENTION: TESTIS SPECIFIC CYSTATIN-LIKE PROTEIN CYSTATIN T
FILE REFERENCE: 98-72
CURRENT APPLICATION NUMBER: US/09/431,480
CURRENT FILING DATE: 1999-11-01
EARLIER APPLICATION NUMBER: 60/109,217
EARLIER FILING DATE: 1998-11-20
EARLIER APPLICATION NUMBER: 60/156,382
EARLIER FILING DATE: 1999-09-28
NUMBER OF SEQ ID NOS: 22
SOFTWARE: FastSeq for Windows Version 3.0
SEQ ID NO 2
LENGTH: 141
TYPE: PRT
ORGANISM: Homo sapiens
US-09-431-480-2

Query Match 38.0%; Score 169.5; DB 3; Length 141;
Best Local Similarity 42.2%; Pred. No. 1.7e-14;
Matches 35; Conservative 17; Mismatches 28; Indels 3; Gaps 2;

QY 1 QYNKESDQKXFRFRVLAKVQROYTDHLEHIANVEMQTTQCKPRTN--CVPER-ELH 57
DB 54 EYNKESDQKXFRFRVLAKVQROYTDHLEHIANVEMQTTQCKPRTN--CVPER-ELH 113
QY 58 KQVNCPSVFAVPMPEQYKILNK 80
DB 114 KQVNCPSVFAVPMPEQYKILNK 136

RESULT 6
US-09-617-302-2
Sequence 2, Application US/09617302
Patent No. 6245529
GENERAL INFORMATION:
APPLICANT: Hollaway, James L.
APPLICANT: Feldhaus, Andrew
TITLE OF INVENTION: TESTIS SPECIFIC CYSTATIN-LIKE PROTEIN CYSTATIN T
FILE REFERENCE: 98-72 C1
CURRENT APPLICATION NUMBER: US/09/617,302
CURRENT FILING DATE: 2000-07-17
PRIOR APPLICATION NUMBER: 09/431,480

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; PRIOR FILING DATE: 1999-11-01
; PRIOR APPLICATION NUMBER: 60/109,217
; PRIOR FILING DATE: 1998-11-20
; PRIOR APPLICATION NUMBER: 60/156,382
; PRIOR FILING DATE: 1999-09-28
; NUMBER OF SEQ ID NOS: 22
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO: 2
; LENGTH: 141
; TYPE: PR1
; ORGANISM: Homo sapiens
; OS-09-617-302-2

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Query Match	38.0%	Score 169.5;	DB 3,	Length 141;
Best Local Similarity	42.2%	Pred. No. 1.7e-14;		
Matches	35;	Conservative	17;	Mismatches 26;
				Indels 3;
				Gaps 2;

```
OY      1 QNNESDDKHHFRIFRVLKVQRQVTLHLEYNLVEMOITTOCK--PETTNCV-PQEREIH 57  
        :|||:::||:|||||:|:|:|:|:|:|:|:|:|:|:  
Db      54 EYNRASNDLYNFRVVDILKSQEQTITSLEYYLEVNARTMCKKIAGDNENCFLQQDPRMK 113
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QY      58 KQVNCFFSVFAVPWFEEQYKILNK 80
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Db      114 KMVFCIFIVSSKPKWKFELKMLKK 136
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RESULT 7

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US-09-775-932-16
; Sequence 16, Application US/09775932
; Patent No. 6534477
; GENERAL INFORMATION:
; APPLICANT: University of British Columbia
; TITLE OF INVENTION: Production and use of Modified Cystatins
; FILE REFERENCE: 58069
; CURRENT APPLICATION NUMBER: US/09/775, 932
; CURRENT FILING DATE: 2001-02-02
; PRIOR APPLICATION NUMBER: CA99/00717
; PRIOR FILING DATE: 1999-08-05
; PRIOR APPLICATION NUMBER: 60/095,503
; PRIOR FILING DATE: 1998-08-05
; NUMBER OF SEQ ID NOS: 32
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 16
; LENGTH: 116
; TYPE: PRP
; ORGANISM: Gallus sp.
US-09-775-932-16

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Query Match	Score	DB 4	Length
34.6%	154.5	DB 4	116

Matches 31; Conservative 17; Mismatches 30; Indels 3; Gaps 2;

Qy	1 QYNKSEDDKHFRIFRLAKYOROVTHLEXLHNVEMOMTTCCKP--ETNNC-VPOGRELH 57
Dz	31 EYRNASDKXSSRVVRYISAKQLVYSIKIILLVEIGRTTCPRSSDLSGCEPHDEPEVA 90
Qy	58 KQNVCFPSFAVPFMEQYKL 78
Dz	91 KYTTCTFVVVISIPMLNOIKLL 111

RESULT 8
US-08-791-522-4
; Sequence 4, Application US/08791522

GENERAL INFORMATION: Bandman, Olga
APPLICANT: Goll, Suyla K.
TITLE OF INVENTION: NOVEL HUMAN CYSTATIN-LIKE
TITLE OF INVENTION: PROTEIN
NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
ADDRESSEE: Incyte Pharmaceuticals, Inc.

STREET: 3174 Porter Drive

STATE: CA

ZIP: 94304

MEDIUM TYPE: Diskette

OPERATING SYSTEM: DOS

CURRENT APPLICATION DATA:
APPLICATION NUMBER: 115/00/701 533

FILING DATE: Filed Herewith

PRIOR APPLICATION DATA:

FILING DATE:

NAME: Billings, Lucy J.

REFERENCE/DOCKET NUMBER: PF-0193 US

TELEPHONE: 415-855-0555

INFORMATION FOR SEQ ID NO: 4

LENGTH: 139 amino acids

STRANDEDNESS: single

IMMEDIATE SOURCE:

CLONE: 118195

US-08-791-522-4

Query Match	34.6%;	Score 154.5;	DB 2;	Length 139;
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Matches 31; Conservative 17; Mismatches 30; Indels 3; Gaps 2;

QY 1 QYNKESDDKYHFRIFRVLKVQRVTDHLEYHLNVEMQWTTCCQP--ETTNC-VPQERELH 57

[illegible]

RESULT 9
US-09-314-777-4

; Patent No. 6110686
GENERAL INFORMATION:

APPLICANT: Bandman, Olga
APPLICANT: Golik, Surya K

TITLE OF INVENTION: NOVEL HUMAN CYSTATIN-LIKE
;
TITLE OR INVENTION: PROTEIN

NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:

ADDRESSEE: Incyte Pharmaceuticals, Inc
STREET: 317A Porter Drive

CITY: Palo Alto
STATE: CA

COUNTRY: USA
ZIP: 94304

COMPUTER READABLE FORM:
MEDIUM TYPE. Diskette

COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS

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; SOFTWARE: FastSEO for Windows Version 2.0
; CURRENT APPLICATION DATA.

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FILING DATE: 08/09/2017

CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/791,522
FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: Billings, Lucy J.
REGISTRATION NUMBER: 36,749
REFERENCE/DOCKET NUMBER: PF-0193 US
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-855-0555
TELEFAX: 415-845-4166
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 139 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
IMMEDIATE SOURCE:
LIBRARY: Genbank
CLONE: 118195
US-09-314-777-4

Query Match 34.6%; Score 154.5; DB 3; Length 139;
Best Local Similarity 38.3%; Pred. No. 1.5e-12;
Matches 31; Conservative 17; Mismatches 30; Indels 3; Gaps 2;

QY 1 QYNKESDDKXHFRIFRVLTQVQVTDHLEHYLVNEMQWTTCKRP--ETTNC-VPOERELH 57
DB 54 EYNKASNDKXSRVVRVIAKQVSGIKYILOVEIGRTTCPSKSGDQSCFPHDEPMA 113
QY 58 KQVNCPSFVPAVPMFEQYKIL 78
DB 114 KYTTCTFVVYSIPMLNQIKLL 134

RESULT 10
US-08-849-303-15
Sequence 15, Application US/08849303
Patent No. 6680424
GENERAL INFORMATION:
APPLICANT: Atkinson, Howard J.
APPLICANT: McPherson, Michael J.
TITLE OF INVENTION: MODIFIED PROTEINASE INHIBITORS
NUMBER OF SEQUENCES: 79
CORRESPONDENCE ADDRESS:
ADDRESSEE: Klauber & Jackson
STREET: 411 Hackensack Avenue, 4th Floor
CITY: Hackensack
STATE: New Jersey
COUNTRY: USA
ZIP: 07601
COMPUTER READABLE FORM:
MEDIUM TYPE: floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent in Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/849,303
FILING DATE: 21-MAY-1997
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: Jackson Esq., David A.
REGISTRATION NUMBER: 26,742
REFERENCE/DOCKET NUMBER: 1321-1-003
TELECOMMUNICATION INFORMATION:
TELEPHONE: 201-343-1684
TELEFAX: 201-487-5800
TELEX: 133521
INFORMATION FOR SEQ ID NO: 15:
SEQUENCE CHARACTERISTICS:
LENGTH: 139 amino acids
TYPE: amino acid

STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
HYPOTHEICAL: NO
US-08-849-303-15

Query Match 34.6%; Score 154.5; DB 4; Length 139;
Best Local Similarity 38.3%; Pred. No. 1.5e-12;
Matches 31; Conservative 17; Mismatches 30; Indels 3; Gaps 2;

QY 1 QYNKESDDKXHFRIFRVLTQVQVTDHLEHYLVNEMQWTTCKRP--ETTNC-VPOERELH 57
DB 54 EYNKASNDKXSRVVRVIAKQVSGIKYILOVEIGRTTCPSKSGDQSCFPHDEPMA 113
QY 58 KQVNCPSFVPAVPMFEQYKIL 78
DB 114 KYTTCTFVVYSIPMLNQIKLL 134

RESULT 11
US-08-849-303-19
Sequence 19, Application US/08849303
Patent No. 6680424
GENERAL INFORMATION:
APPLICANT: Atkinson, Howard J.
APPLICANT: McPherson, Michael J.
TITLE OF INVENTION: MODIFIED PROTEINASE INHIBITORS
NUMBER OF SEQUENCES: 79
CORRESPONDENCE ADDRESS:
ADDRESSEE: Klauber & Jackson
STREET: 411 Hackensack Avenue, 4th Floor
CITY: Hackensack
STATE: New Jersey
COUNTRY: USA
ZIP: 07601
COMPUTER READABLE FORM:
MEDIUM TYPE: floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent in Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/849,303
FILING DATE: 21-MAY-1997
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: Jackson Esq., David A.
REGISTRATION NUMBER: 26,742
REFERENCE/DOCKET NUMBER: 1321-1-003
TELECOMMUNICATION INFORMATION:
TELEPHONE: 201-487-5800
TELEFAX: 201-343-1684
TELEX: 133521
INFORMATION FOR SEQ ID NO: 19:
SEQUENCE CHARACTERISTICS:
LENGTH: 127 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
HYPOTHEICAL: NO
US-08-849-303-19

Query Match 34.0%; Score 151.5; DB 4; Length 127;
Best Local Similarity 39.2%; Pred. No. 3.3e-12;
Matches 29; Conservative 18; Mismatches 24; Indels 3; Gaps 2;

QY 1 QYNKESDDKXHFRIFRVLTQVQVTDHLEHYLVNEMQWTTCKRP--ETTNC-VPOERELH 57
DB 40 EYNKASNDKXSRVVRVIAKQVSGIKYILOVEIGRTTCPSKSGDQSCFPHDEPMA 99
QY 58 KQVNCPSFVPAVPMFEQYKIL 71

Db 100 RKALCSFOIYSVPM 113

RESULT 12

5432264-6

; Patent No. 5432264

; APPLICANT: GRUBB, ANDERS; LUNDWALL, AKE; ABRAHAMSON, MAGNUS;

; DALBOGE, HENRIK

; TITLE OF INVENTION: RECOMBINANT 3-DES-OH-CYSTATIN C PRODUCED

; BY EXPRESSION IN A PROCAROTIC HOST CELL

; NUMBER OF SEQUENCES: 8

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/07/929,290

; FILING DATE: 13-AUG-1992

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: 440,221

; FILING DATE: 21-NOV-1989

; APPLICATION NUMBER: 297,198

; FILING DATE: 20-MAY-1988

; SEQ ID NO:6:

; LENGTH: 146

5432264-6

Query Match 33.2%; Score 148; DB 6; Length 146;

Best Local Similarity 37.3%; Pred. No. 1.1e-11;

Matches 31; Conservative 16; Mismatches 30; Indels 4; Gaps 3;

QY 1 QYNKESDXYHFRIFVLKQVQVTDHLEHYLNVEMQWTTQCK--PETTNC-VPOERELH 57

Db 59 EYKASNDWYHSRALQVVRARQIVAGVNYFLDVELGRTTCTKQPYLDNC PFHDQPHLK 118

QY 58 KQVNCFFSVAVPWFQYKILNK 80

Db 119 RKAFCSFOIYAVPW-QQTMTLTK 140

RESULT 13

US-09-775-932-2

; Sequence 2, Application US/09775932

; Patent No. 6534477

; GENERAL INFORMATION:

; APPLICANT: University of British Columbia

; TITLE OF INVENTION: Production and use of Modified Cytatins

; FILE REFERENCE: 58069

; CURRENT APPLICATION NUMBER: US/09/775,932

; CURRENT FILING DATE: 2001-02-02

; PRIOR APPLICATION NUMBER: CA99/00717

; PRIOR FILING DATE: 1999-08-05

; PRIOR APPLICATION NUMBER: 60/095,503

; PRIOR FILING DATE: 1998-08-05

; NUMBER OF SEQ ID NOS: 32

; SOFTWARE: PatentIn Ver. 2.0

; SEQ ID NO 2

; LENGTH: 120

; TYPE: PRT

; ORGANISM: Homo sapiens

; US-09-775-932-2

Query Match 33.6%; Score 145.5; DB 4; Length 120;

Best Local Similarity 37.8%; Pred. No. 1.9e-11;

Matches 28; Conservative 16; Mismatches 27; Indels 3; Gaps 2;

QY 1 QYNKESDXYHFRIFVLKQVQVTDHLEHYLNVEMQWTTQCK--PETTNC-VPOERELH 57

Db 33 EYKASNDWYHSRALQVVRARQIVAGVNYFLDVELGRTTCTKQPYLDNC PFHDQPHLK 92

QY 58 KQVNCFFSVAVPWF 71

Db 93 RKAFCSFOIYAVPW 106

RESULT 14

5432264-4

; Patent No. 5432264

; APPLICANT: GRUBB, ANDERS; LUNDWALL, AKE; ABRAHAMSON, MAGNUS;

; DALBOGE, HENRIK

; TITLE OF INVENTION: RECOMBINANT 3-DES-OH-CYSTATIN C PRODUCED

; BY EXPRESSION IN A PROCAROTIC HOST CELL

; NUMBER OF SEQUENCES: 8

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/07/929,290

; FILING DATE: 13-AUG-1992

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: 440,221

; FILING DATE: 21-NOV-1989

; APPLICATION NUMBER: 297,198

; FILING DATE: 20-MAY-1988

; SEQ ID NO:4:

; LENGTH: 120

5432264-4

Query Match 32.6%; Score 145.5; DB 6; Length 120;

Best Local Similarity 37.8%; Pred. No. 1.9e-11;

Matches 28; Conservative 16; Mismatches 27; Indels 3; Gaps 2;

QY 1 QYNKESDXYHFRIFVLKQVQVTDHLEHYLNVEMQWTTQCK--PETTNC-VPOERELH 57

Db 33 EYKASNDWYHSRALQVVRARQIVAGVNYFLDVELGRTTCTKQPYLDNC PFHDQPHLK 92

QY 58 KQVNCFFSVAVPWF 71

Db 93 RKAFCSFOIYAVPW 106

RESULT 15

US-08-832-535-11

; Sequence 11, Application US/08832535

; Patent No. 5919658

; GENERAL INFORMATION:

; APPLICANT: NI, JIAN

; APPLICANT: LI, HAODONG

; APPLICANT: YU, GUO-LIANG

; APPLICANT: GENTZ, REINER L

; TITLE OF INVENTION: HUMAN CYSTATIN P

; NUMBER OF SEQUENCES: 11

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: HUMAN GENOME SCIENCES, INC.

; STREET: 9410 KEY WEST AVENUE

; CITY: ROCKVILLE

; STATE: MD

; COUNTRY: US

; ZIP: 20850

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.30

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/832,535

; FILING DATE: 03-APR-1997

; CLASSIFICATION: 435

; ATTORNEY/AGENT INFORMATION:

; NAME: KIMBALL, PAUL C.

; REGISTRATION NUMBER: 34,610

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: (201) 994-1744

; INFORMATION FOR SEQ ID NO: 11:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 145 amino acids

; TYPE: amino acid

; STRANDEDNESS: single

; TOPOLOGY: linear

; MOLECULE TYPE: peptide

; US-08-832-535-11

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OM protein - protein search, using sw model

Run on: March 23, 2004, 17:10:34 ; Search time 43.1799 Seconds

(Without alignments)
479.770 Million cell updates/sec

Title: US-09-941-314-15

Perfect score: 446
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Gapop 10.0 , Gapext 0.5

Searched: 1049977 seqs, 258955339 residues

Total number of hits satisfying chosen parameters: 1049977

Minimum DB seq length: 0

Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%

Maximum Match 100%
Listing first 45 summaries

Database :

Published Applications AA:*

- 1: /cgn2_6/ptodata/1/pubppaa/US07_PUBCOMB.pep.*
- 2: /cgn2_6/ptodata/1/pubppaa/PCT_NEW_PUB.pep.*
- 3: /cgn2_6/ptodata/1/pubppaa/US06_NEW_PUB.pep.*
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- 5: /cgn2_6/ptodata/1/pubppaa/US07_NEW_PUB.pep.*
- 6: /cgn2_6/ptodata/1/pubppaa/PCTUS_PUBCOMB.pep.*
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- 8: /cgn2_6/ptodata/1/pubppaa/US08_PUBCOMB.pep.*
- 9: /cgn2_6/ptodata/1/pubppaa/US09A_PUBCOMB.pep.*
- 10: /cgn2_6/ptodata/1/pubppaa/US09B_PUBCOMB.pep.*
- 11: /cgn2_6/ptodata/1/pubppaa/US09C_PUBCOMB.pep.*
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- 13: /cgn2_6/ptodata/1/pubppaa/US10A_PUBCOMB.pep.*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	446	100.0	80	US-09-941-314-15	Sequence 15, Appl1
2	446	100.0	115	US-09-941-314-3	Sequence 3, Appl1
3	446	100.0	117	US-09-941-314-4	Sequence 4, Appl1
4	446	100.0	137	US-09-941-314-2	Sequence 2, Appl1
5	334	74.9	59	US-09-941-314-16	Sequence 16, Appl1
6	288	64.6	52	US-09-941-314-14	Sequence 14, Appl1
7	273	61.2	48	US-09-941-314-17	Sequence 17, Appl1
8	266	59.6	49	US-09-941-314-13	Sequence 13, Appl1
9	254	57.0	46	US-09-941-314-10	Sequence 10, Appl1
10	189	42.4	33	US-09-941-314-12	Sequence 12, Appl1
11	158	35.4	145	US-09-740-638-2	Sequence 2, Appl1
12	158	35.4	145	US-10-006-467-2	Sequence 2, Appl1
13	158	35.4	145	US-10-235-148-2	Sequence 2, Appl1
14	154.5	34.6	116	US-09-775-932-16	Sequence 16, Appl1
15	154.5	34.6	139	US-08-849-303-15	Sequence 15, Appl1

16	154.5	34.6	139	9	US-09-969-834-4	Sequence 4, Appl1
17	152	34.1	145	14	US-10-168-425-14	Sequence 14, Appl1
18	151.5	34.0	127	8	US-08-849-303-19	Sequence 19, Appl1
19	145.5	32.6	120	9	US-09-775-932-2	Sequence 2, Appl1
20	145.5	32.6	146	8	US-08-849-303-17	Sequence 17, Appl1
21	145.5	32.6	146	9	US-09-940-497-3	Sequence 3, Appl1
22	145.5	32.6	146	9	US-09-969-834-3	Sequence 3, Appl1
23	145.5	32.6	146	14	US-10-329-428-3	Sequence 3, Appl1
24	145.5	32.6	146	14	US-10-376-564-47	Sequence 47, Appl1
25	144.5	32.4	121	9	US-09-775-932-8	Sequence 8, Appl1
26	144.5	32.4	141	8	US-08-849-303-24	Sequence 24, Appl1
27	144.5	32.4	141	9	US-09-940-497-6	Sequence 6, Appl1
28	142.5	32.0	140	14	US-10-376-564-46	Sequence 46, Appl1
29	142.5	32.0	140	15	US-10-376-564-48	Sequence 48, Appl1
30	139.5	31.3	181	15	US-10-264-049-2608	Sequence 2608, Ap
31	138.5	31.1	140	8	US-08-849-303-18	Sequence 18, Appl1
32	138	30.9	24	9	US-09-941-314-11	Sequence 11, Appl1
33	138	30.9	165	9	US-09-740-638-5	Sequence 5, Appl1
34	138	30.9	165	13	US-10-006-467-5	Sequence 5, Appl1
35	138	30.9	165	14	US-10-235-148-5	Sequence 5, Appl1
36	137	30.7	27	9	US-09-941-314-9	Sequence 9, Appl1
37	137	30.7	35	9	US-09-941-314-8	Sequence 8, Appl1
38	133.5	29.9	112	8	US-08-849-303-16	Sequence 16, Appl1
39	133.5	29.9	118	9	US-09-775-932-24	Sequence 24, Appl1
40	131.5	29.5	121	9	US-09-775-932-4	Sequence 4, Appl1
41	131.5	29.5	141	8	US-08-849-303-22	Sequence 22, Appl1
42	131.5	29.5	141	9	US-09-940-497-5	Sequence 5, Appl1
43	131.5	29.5	141	9	US-09-974-298-141	Sequence 11, App
44	131.5	29.5	141	14	US-10-241-220-77	Sequence 77, Appl1
45	126.5	28.4	148	12	US-10-257-174-42	Sequence 42, Appl1

ALIGNMENTS

RESULT 1
US-09-941-314-15
Sequence 15, Application US/09941314
Patent No. US20020142396A1
GENERAL INFORMATION:
APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-B and Its Use to
TITLE OR INVENTION: Inhibit Cancer Procoagulant Protein
FILE REFERENCE: 00-81PC
CURRENT APPLICATION NUMBER: US/09/941,314
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
NUMBER OF SEQ ID NOS: 19
SOFTWARE: FASTSEQ for Windows Version 4.0
SEQ ID NO 15
LENGTH: 80
TYPE: PRT
ORGANISM: Homo sapiens
US-09-941-314-15

Query Match 100.0%; Score 446; DB 9; Length 80;
Best Local Similarity 100.0%; Pred. No. 1e-46;
Matches 80; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 QYNKESDDKHFRIFRVLKVQROVTDHLEHVLNVEQMTTCQKPEITNCVPOREHLKQV 60
DB 1 QYNKESDDKHFRIFRVLKVQROVTDHLEHVLNVEQMTTCQKPEITNCVPOREHLKQV 60

QY 61 NCFPSVFAVPWFQYKILNK 80
DB 61 NCFPSVFAVPWFQYKILNK 80

RESULT 2
US-09-941-314-3
Sequence 3, Application US/09941314
Patent No. US20020142396A1

```
/ GENERAL INFORMATION:
/ APPLICANT: ZymoGenetics, Inc.
/ TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
/ TITLE OF INVENTION: Inhibit Cancer Procoagulant Protein
/ FILE REFERENCE: 00-81PC
/ CURRENT APPLICATION NUMBER: US/09/941,314
/ PRIOR FILING DATE: 2001-08-29
/ PRIOR APPLICATION NUMBER: 60/230,230
/ PRIOR FILING DATE: 2001-09-01
/ NUMBER OF SEQ ID NOS: 19
/ SOFTWARE: FastSeq for Windows Version 4.0
/ SEQ ID NO 3
/ LENGTH: 115
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-09-941-314-3

Query Match      100.0%; Score 446; DB 9; Length 115;
Best Local Similarity 100.0%; Pred. No. 6,3e-46;
Matches 80; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 QYNKESDCKXHFRIFRVLKQROVTDHLEHYLNVEMQWTTCCQKPEITNCVPOERELHKOV 60
DB 31 QYNKESDCKXHFRIFRVLKQROVTDHLEHYLNVEMQWTTCCQKPEITNCVPOERELHKOV 90

QY 61 NCFPSVFAVPWFPEQYKILNK 80
DB 91 NCFPSVFAVPWFPEQYKILNK 110

RESULT 3
US-09-941-314-4
/ Sequence 4, Application US/09941314
/ Patent No. US20020142396A1
/ GENERAL INFORMATION:
/ APPLICANT: ZymoGenetics, Inc.
/ TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
/ TITLE OF INVENTION: Inhibit Cancer Procoagulant Protein
/ FILE REFERENCE: 00-81PC
/ CURRENT APPLICATION NUMBER: US/09/941,314
/ CURRENT FILING DATE: 2001-08-29
/ PRIOR APPLICATION NUMBER: 60/230,230
/ PRIOR FILING DATE: 2001-09-01
/ NUMBER OF SEQ ID NOS: 19
/ SOFTWARE: FastSeq for Windows Version 4.0
/ SEQ ID NO 4
/ LENGTH: 117
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-09-941-314-4

Query Match      100.0%; Score 446; DB 9; Length 117;
Best Local Similarity 100.0%; Pred. No. 6,4e-46;
Matches 80; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 QYNKESDCKXHFRIFRVLKQROVTDHLEHYLNVEMQWTTCCQKPEITNCVPOERELHKOV 60
DB 33 QYNKESDCKXHFRIFRVLKQROVTDHLEHYLNVEMQWTTCCQKPEITNCVPOERELHKOV 92

QY 61 NCFPSVFAVPWFPEQYKILNK 80
DB 93 NCFPSVFAVPWFPEQYKILNK 112

RESULT 4
US-09-941-314-2
/ Sequence 2, Application US/09941314
/ Patent No. US20020142396A1
/ GENERAL INFORMATION:
/ APPLICANT: ZymoGenetics, Inc.
/ TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
/ TITLE OF INVENTION: Inhibit Cancer Procoagulant Protein
/ FILE REFERENCE: 00-81PC
```

```
/ CURRENT APPLICATION NUMBER: US/09/941,314
/ CURRENT FILING DATE: 2001-08-29
/ PRIOR APPLICATION NUMBER: 60/230,230
/ PRIOR FILING DATE: 2001-09-01
/ NUMBER OF SEQ ID NOS: 19
/ SOFTWARE: FastSeq for Windows Version 4.0
/ SEQ ID NO 2
/ LENGTH: 137
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-09-941-314-2

Query Match      100.0%; Score 446; DB 9; Length 137;
Best Local Similarity 100.0%; Pred. No. 7,7e-46;
Matches 80; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 QYNKESDCKXHFRIFRVLKQROVTDHLEHYLNVEMQWTTCCQKPEITNCVPOERELHKOV 60
DB 53 QYNKESDCKXHFRIFRVLKQROVTDHLEHYLNVEMQWTTCCQKPEITNCVPOERELHKOV 112

QY 61 NCFPSVFAVPWFPEQYKILNK 80
DB 113 NCFPSVFAVPWFPEQYKILNK 132

RESULT 5
US-09-941-314-16
/ Sequence 16, Application US/09941314
/ Patent No. US20020142396A1
/ GENERAL INFORMATION:
/ APPLICANT: ZymoGenetics, Inc.
/ TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
/ TITLE OF INVENTION: Inhibit Cancer Procoagulant Protein
/ FILE REFERENCE: 00-81PC
/ CURRENT APPLICATION NUMBER: US/09/941,314
/ CURRENT FILING DATE: 2001-08-29
/ PRIOR APPLICATION NUMBER: 60/230,230
/ PRIOR FILING DATE: 2001-09-01
/ NUMBER OF SEQ ID NOS: 19
/ SOFTWARE: FastSeq for Windows Version 4.0
/ SEQ ID NO 16
/ LENGTH: 59
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-09-941-314-16

Query Match      74.9%; Score 334; DB 9; Length 59;
Best Local Similarity 100.0%; Pred. No. 9,2e-33;
Matches 59; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 RQVTDHLEHYLNVEMQWTTCCQKPEITNCVPOERELHKOVNCFPSVFAVPWFPEQYKILNK 80
DB 1 RQVTDHLEHYLNVEMQWTTCCQKPEITNCVPOERELHKOVNCFPSVFAVPWFPEQYKILNK 59

RESULT 6
US-09-941-314-14
/ Sequence 14, Application US/09941314
/ Patent No. US20020142396A1
/ GENERAL INFORMATION:
/ APPLICANT: ZymoGenetics, Inc.
/ TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
/ TITLE OF INVENTION: Inhibit Cancer Procoagulant Protein
/ FILE REFERENCE: 00-81PC
/ CURRENT APPLICATION NUMBER: US/09/941,314
/ CURRENT FILING DATE: 2001-08-29
/ PRIOR APPLICATION NUMBER: 60/230,230
/ PRIOR FILING DATE: 2001-09-01
/ NUMBER OF SEQ ID NOS: 19
/ SOFTWARE: FastSeq for Windows Version 4.0
/ SEQ ID NO 14
/ LENGTH: 52
/ TYPE: PRT
```

ORGANISM: Homo sapiens
US-09-941-314-14

Query Match 64.6%; Score 288; DB 9; Length 52;
Best Local Similarity 100.0%; Pred. No. 2.8e-27;
Matches 52; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 4 KESDDKXHFRIFRVLKQROVTDHLEVHLNVEQMWTTCQKPEITNCVPOERE 55
DB 1 KESDDKXHFRIFRVLKQROVTDHLEVHLNVEQMWTTCQKPEITNCVPOERE 52

RESULT 7
US-09-941-314-17

Sequence 17, Application US/09941314
Patent No. US20020142396A1
GENERAL INFORMATION:
APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
FILE REFERENCE: 00-81PC
CURRENT APPLICATION NUMBER: US/09/941.314
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
NUMBER OF SEQ ID NOS: 19
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 17
LENGTH: 48
TYPE: PRT
ORGANISM: Homo sapiens
US-09-941-314-17

Query Match 61.2%; Score 273; DB 9; Length 48;
Best Local Similarity 100.0%; Pred. No. 1.6e-25;
Matches 48; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 33 NVEMQWTTCKPRTTNCVPOEREHLKQVNCFFSFPANPMPQYKILNK 80
DB 1 NVEMQWTTCKPRTTNCVPOEREHLKQVNCFFSFPANPMPQYKILNK 48

RESULT 8
US-09-941-314-13

Sequence 13, Application US/09941314
Patent No. US20020142396A1
GENERAL INFORMATION:
APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
FILE REFERENCE: 00-81PC
CURRENT APPLICATION NUMBER: US/09/941.314
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
NUMBER OF SEQ ID NOS: 19
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 13
LENGTH: 49
TYPE: PRT
ORGANISM: Homo sapiens
US-09-941-314-13

Query Match 59.6%; Score 266; DB 9; Length 49;
Best Local Similarity 100.0%; Pred. No. 1.2e-24;
Matches 49; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 QYNKESDXXHFRIFRVLKQROVTDHLEVHLNVEQMWTTCQKPEITN 48
DB 2 QYNKESDXXHFRIFRVLKQROVTDHLEVHLNVEQMWTTCQKPEITN 49

RESULT 9

US-09-941-314-10

Sequence 10, Application US/09941314
Patent No. US20020142396A1
GENERAL INFORMATION:
APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
FILE REFERENCE: 00-81PC
CURRENT APPLICATION NUMBER: US/09/941.314
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
NUMBER OF SEQ ID NOS: 19
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 10
LENGTH: 46
TYPE: PRT
ORGANISM: Homo sapiens
US-09-941-314-10

Query Match 57.0%; Score 254; DB 9; Length 46;
Best Local Similarity 100.0%; Pred. No. 3e-23;
Matches 46; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 3 NKESDXXHFRIFRVLKQROVTDHLEVHLNVEQMWTTCQKPEITN 48
DB 1 NKESDXXHFRIFRVLKQROVTDHLEVHLNVEQMWTTCQKPEITN 46

RESULT 10
US-09-941-314-12

Sequence 12, Application US/09941314
Patent No. US20020142396A1
GENERAL INFORMATION:
APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
FILE REFERENCE: 00-81PC
CURRENT APPLICATION NUMBER: US/09/941.314
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
NUMBER OF SEQ ID NOS: 19
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 12
LENGTH: 33
TYPE: PRT
ORGANISM: Homo sapiens
US-09-941-314-12

Query Match 42.4%; Score 189; DB 9; Length 33;
Best Local Similarity 100.0%; Pred. No. 1.4e-15;
Matches 33; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 23 QVTDHLEVHLNVEQMWTTCQKPEITNCVPOERE 55
DB 1 QVTDHLEVHLNVEQMWTTCQKPEITNCVPOERE 33

RESULT 11
US-09-740-638-2

Sequence 2, Application US/09740638
Patent No. US20020006656A1
GENERAL INFORMATION:
APPLICANT: Holloway, James L.
TITLE OF INVENTION: Zcy85: A Member of the Cystatin
FILE REFERENCE: 99-104
CURRENT APPLICATION NUMBER: US/09/740.638
CURRENT FILING DATE: 2000-12-18
NUMBER OF SEQ ID NOS: 13
SOFTWARE: FastSeq for Windows Version 3.0
SEQ ID NO 2

LENGTH: 145
 TYPE: PRT
 ORGANISM: Homo sapiens
 US-09-740-638-2

Query Match 35.4%; Score 158; DB 9; Length 145;
 Best Local Similarity 33.8%; Pred. No. 4.3e-11;
 Matches 27; Conservative 24; Mismatches 27; Indels 2; Gaps 1;

QY 2 YNKESDDKHFRIFRVLKQOVTDHLEHNLNEMQWTCOKPETN--CVPOERELHKQ 59
 DB 52 YNNASNDTYLYRQRLRSQRLTTGVEYIVTVKIGMTCKGRNDTSNSSCPLOSKKLRS 111

QY 60 VNCFFSVFAVWPEQYKILN 79
 DB 112 LICESLIYTPWIMYFOLMN 131

RESULT 12
 US-10-006-467-2
 Sequence 2, Application US/10006467
 Publication No. US20020164740A1

GENERAL INFORMATION:
 APPLICANT: Holloway, James L.
 TITLE OF INVENTION: Zcy5: A Member of the Cystatin
 FILE REFERENCE: 99-104C1

CURRENT APPLICATION NUMBER: US/10/006,467

PRIOR FILING DATE: 2001-12-04

PRIOR APPLICATION NUMBER: 60/172,119

PRIOR FILING DATE: 1999-12-23

PRIOR APPLICATION NUMBER: 09/740,638

PRIOR FILING DATE: 2000-12-18

NUMBER OF SEQ ID NOS: 13

SOFTWARE: FastSeq for Windows Version 3.0

SEQ ID NO 2

LENGTH: 145

TYPE: PRT

ORGANISM: Homo sapiens

US-10-006-467-2

Query Match 35.4%; Score 158; DB 13; Length 145;
 Best Local Similarity 33.8%; Pred. No. 4.3e-11;
 Matches 27; Conservative 24; Mismatches 27; Indels 2; Gaps 1;

QY 2 YNKESDDKHFRIFRVLKQOVTDHLEHNLNEMQWTCOKPETN--CVPOERELHKQ 59
 DB 52 YNNASNDTYLYRQRLRSQRLTTGVEYIVTVKIGMTCKGRNDTSNSSCPLOSKKLRS 111

QY 60 VNCFFSVFAVWPEQYKILN 79
 DB 112 LICESLIYTPWIMYFOLMN 131

RESULT 13
 US-10-235-148-2
 Sequence 2, Application US/10235148
 Publication No. US20030100096A1

GENERAL INFORMATION:
 APPLICANT: Holloway, James L.
 TITLE OF INVENTION: Zcy5: A Member of the Cystatin
 FILE REFERENCE: 99-104C1

CURRENT APPLICATION NUMBER: US/10/235,148

PRIOR FILING DATE: 2002-09-04

PRIOR APPLICATION NUMBER: 60/172,119

PRIOR FILING DATE: 1999-12-23

PRIOR APPLICATION NUMBER: 09/740,638

PRIOR FILING DATE: 2000-12-18

NUMBER OF SEQ ID NOS: 13

SOFTWARE: FastSeq for Windows Version 3.0

SEQ ID NO 2

LENGTH: 145

TYPE: PRT
 ORGANISM: Homo sapiens
 US-10-235-148-2

Query Match 35.4%; Score 158; DB 14; Length 145;
 Best Local Similarity 33.8%; Pred. No. 4.3e-11;
 Matches 27; Conservative 24; Mismatches 27; Indels 2; Gaps 1;

QY 2 YNKESDDKHFRIFRVLKQOVTDHLEHNLNEMQWTCOKPETN--CVPOERELHKQ 59
 DB 52 YNNASNDTYLYRQRLRSQRLTTGVEYIVTVKIGMTCKGRNDTSNSSCPLOSKKLRS 111

QY 60 VNCFFSVFAVWPEQYKILN 79
 DB 112 LICESLIYTPWIMYFOLMN 131

RESULT 14
 US-09-775-932-16
 Sequence 16, Application US/09775932
 Patent No. US20020137671A1

GENERAL INFORMATION:
 APPLICANT: University of British Columbia
 TITLE OF INVENTION: Production and use of Modified Cystatins
 FILE REFERENCE: 58069

CURRENT APPLICATION NUMBER: US/09/775,932

PRIOR FILING DATE: 2001-02-02

PRIOR APPLICATION NUMBER: CA99/00717

PRIOR FILING DATE: 1999-08-05

PRIOR APPLICATION NUMBER: 60/095,503

PRIOR FILING DATE: 1998-08-05

NUMBER OF SEQ ID NOS: 32

SOFTWARE: Patentin Ver. 2.0

SEQ ID NO 16

LENGTH: 116

TYPE: PRT

ORGANISM: Gallus sp.

US-09-775-932-16

Query Match 34.6%; Score 154.5; DB 9; Length 116;
 Best Local Similarity 38.3%; Pred. No. 8.8e-11;
 Matches 31; Conservative 17; Mismatches 30; Indels 3; Gaps 2;

QY 1 QNKESDDKHFRIFRVLKQOVTDHLEHNLNEMQWTCOKP--ETNC-VPOERELH 57
 DB 31 EYNRASNDKXSSRVRYISAKQLVSGIKYILQVEIRTTCPSSGDLQCEFDPEMA 90

QY 58 KQVNCFFSVFAVWPEQYKIL 78
 DB 91 KYTTCFVYVSIPLNDQIKL 111

RESULT 15
 US-08-849-303-15
 Sequence 15, Application US/08849303
 Publication No. US20030221209A1

GENERAL INFORMATION:
 APPLICANT: Atkinson, Howard J.
 TITLE OF INVENTION: MODIFIED PROTEINASE INHIBITORS
 CORRESPONDENCE ADDRESSES:
 ADDRESS: Klauber & Jackson
 STREET: 411 Hackensack Avenue, 4th Floor
 CITY: Hackensack
 STATE: New Jersey
 COUNTRY: USA
 ZIP: 07601

COMPUTER READABLE FORM:
 MEDIUM TYPE: Floppy disk
 COMPUTER: IBM PC compatible
 OPERATING SYSTEM: PC-DOS/MS-DOS

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

OPERATING SYSTEM: PC-DOS/MS-DOS

OPERATING SYSTEM: PC-DOS/MS-DOS

OPERATING SYSTEM: PC-DOS/MS-DOS

OPERATING SYSTEM: PC-DOS/MS-DOS

OPERATING SYSTEM: PC-DOS/MS-DOS

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OM protein - protein search, using sw model

Run on: March 23, 2004, 17:06:09 ; Search time 14.728 Seconds
(without alignments)
522.495 Million cell updates/sec

Title: US-09-941-314-15

Perfect score: 446
Sequence: 1 QYNKESDQKHFRILFRVLKV.....NCFPSVAVPWFQYKILNK 80

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 283366 seqs, 96191526 residues

Total number of hits satisfying chosen parameters: 283366

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : PIR 78:*

1: PIR1:*\n2: PIR2:*\n3: PIR3:*\n4: PIR4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	199.5	44.7	139	2 A45361	cystatin-related e
2	154.5	34.6	139	1 UDCH	cystatin precursor
3	151.5	34.0	120	2 S10587	cystatin C - rat
4	151.5	34.0	127	2 S07085	cystatin C precurs
5	145.5	32.6	146	1 UDHU	cystatin C precurs
6	144.5	32.4	141	2 B29632	cystatin SA precurs
7	138.5	31.1	140	2 A36163	cystatin C precurs
8	133.5	29.9	112	1 UDBO	cystatin - bovine
9	131.5	29.5	141	1 UDHUP1	cystatin S precurs
10	125.5	28.1	141	1 UDHUP1	cystatin SN precurs
11	123	27.6	111	2 A28793	cystatin - puff ad
12	118	26.5	142	2 A47142	cystatin D precurs
13	106	23.8	111	1 JC2040	cystatin - chum sa
14	104	23.3	141	2 JQ1470	cystatin S precurs
15	98	22.0	132	2 JC4918	cystatin precursor
16	97.5	21.9	434	1 KGBOL2	kininogen, LMW II
17	97.5	21.9	619	1 KGBOL2	kininogen, LMW II
18	96.5	21.6	436	1 KGBOL1	kininogen, LMW I P
19	96.5	21.6	621	1 KGBOL1	kininogen, LMW I P
20	95.5	21.4	162	1 A34428	onchoyestatin - ne
21	91.5	20.5	427	1 KGHU1	kininogen, LMW pre
22	91.5	20.5	644	1 KGHU1	kininogen, LMW pre
23	84	18.8	433	2 A28055	K-kininogen, LMW I
24	84	18.8	639	2 A25486	kininogen, LMW I P
25	82.5	18.5	133	2 JC4536	cystatin precursor
26	78	17.5	430	2 A23897	major acute phase
27	78	17.5	430	2 B28055	T-kininogen, LMW I
28	76	17.0	430	1 KGRIT1	T-kininogen I prec
29	75	16.8	498	2 T31871	hypothetical prote

30	72	16.1	423	1 KGRIT1	major acute phase
31	69	15.5	1779	2 T23130	hypothetical prote
32	65	14.6	602	2 A35564	prostaglandin-endo
33	64.5	14.5	505	2 T51403	hypothetical prote
34	64	14.3	915	1 RDBNH	nitrate reductase
35	63.5	14.2	455	2 T15622	hypothetical prote
36	63	14.1	325	2 F69784	conserved hypochet
37	63	14.1	438	2 A47702	glucan 1,3-beta-gl
38	63	14.1	438	2 T52149	beta-glucanase [im
39	62.5	14.0	620	2 S55086	probable membrane
40	62.5	14.0	1585	2 T19121	probable protein-t
41	62	13.9	602	2 S69198	prostaglandin G/H
42	62	13.9	602	2 S39782	cyclooxygenase 1 -
43	61	13.7	555	2 T24671	hypothetical prote
44	60	13.5	257	2 T03724	C-type cyclin - ri
45	60	13.5	1658	2 T42642	phosphoinositide 3

ALIGNMENTS

RESULT 1

A45361 cystatin-related epididymal specific protein - mouse (fragment)

C:Species: Mus musculus (house mouse)

C>Date: 10-Jun-1993 #sequence_revision 18-Nov-1994 #text_change 05-Nov-1999

C/Accession: A45361

R:Corwall, G.A.; Orgebin-Crist, M.C.; Hann, S.R.
Mol. Endocrinol. 6, 1653-1664, 1992

A>Title: The CREB gene: a unique testis-regulated gene related to the cystatin family is

A/Reference number: A45361; MUID:93078799; PMID:1280328

A/Accession: A45361

A/Status: preliminary; not compared with conceptual translation

A/Molecule type: nucleic acid

A/Residues: 1-139 <COR>

A/Cross-references: GB:849926; NID:9260492; PIDN:AAC35390.1; PID:9260493

A/Note: sequence extracted from NCBI backbone (NCBIP:118813)

C:Superfamily: cystatin; cystatin homology

F:28-139/Domain: cystatin homology <CIS>

Query Match	44.7%	Score 199.5;	DB 2;	Length 139;
Best Local Similarity	42.2%	Pred. No. 4.2e-15;		
Matches	35;	Conservative	25;	Mismatches 20;
				Indels 3;
				Gaps 2;

RESULT 2

UDCH

cystatin precursor - chicken

N/Alternate names: cystatin I; cysteine proteinase inhibitor; egg-white cystatin

C/Species: Gallus gallus (chicken)

C/Date: 03-Aug-1984 #sequence_revision 12-Apr-1996 #text_change 29-Oct-1999

C/Accession: A34456; A01274; S01461; S48159; S04009; JN0789

R:Coella, R.; Sakaguchi, Y.; Nagase, H.; Bird, J.W.C.
J. Biol. Chem. 264, 17164-17169, 1989

A>Title: Chicken egg white cystatin. Molecular cloning, nucleotide sequence, and tissue c

A/Reference number: A34456; MUID:90008873; PMID:2793849

A/Accession: A34456

A/Molecule type: mRNA

A/Residues: 1-139 <COL>

A/Cross-references: GB:J05077; NID:g211714; PIDN:AAA48744.1; PID:g211715

R/Schwabe, C.; Anastasi, A.; Crow, H.; McDonald, J.K.; Barrett, A.V.

Biochem. J. 217, 813-817, 1984

A>Title: Cystatin. Amino acid sequence and possible secondary structure.

A/Reference number: A01274; MUID:84178305; PMID:6712597

A/Accession: A01274

A:Molecule type: protein
A:Residues: 24-139 <SCH>
R:Turk, V.; Brzin, J.; Longer, M.; Riconja, A.; Eropkin, M.; Borchardt, U.; Machleidt, W.
Hoppe-Seyler's Z. Physiol. Chem. 364, 1487-1496, 1983
A>Title: Protein inhibitors of cysteine proteinases. III. Amino-acid sequence of cystatins
A:Reference number: S01461; PMID:84110059; PMID:6662498
A:Accession: S01461
A:Molecule type: protein
A:Residues: 24-139 <TUR>
R:Anastasi, A.; Brown, M.A.; Kembhavvi, A.A.; Nicklin, M.T.H.; Sayers, C.A.; Sunter, D.C.
Biochem. J. 211, 129-138, 1983
A>Title: Cystatin, a protein inhibitor of cysteine proteinases. Improved purification from sheep erythrocytes
A:Reference number: A37514; PMID:83256421; PMID:6409085
A:Contents: annotation; characterization of protein
R:Grubb, A.; Lofberg, H.; Barrelet, A.J.
FEBS Lett. 170, 370-374, 1984
A>Title: The disulfide bridges of human cystatin C (gamma-trace) and chicken cystatin.
A:Reference number: S01462
A:Contents: annotation; disulfide bonds
R:Auerswald, E.A.; Naegele, D.K.; Schulze, A.J.; Engn, R.A.; Genenger, G.; Machleidt, W.
Eur. J. Biochem. 224, 407-415, 1994
A>Title: Production, inhibitory activity, folding and conformational analysis of an N-terminal fragment of chicken cystatin C
A:Reference number: S48159; PMID:95010016; PMID:7925354
A:Accession: S48159
A>Status: preliminary
A:Molecule type: protein
A:Residues: 24-139 <ADE>
R:Labeer, B.; Krieglstein, K.; Henschen, A.; Kos, J.; Turk, V.; Huber, R.; Bode, W.
FEBS Lett. 248, 162-168, 1989
A>Title: The cysteine proteinase inhibitor chicken cystatin is a phosphoprotein.
A:Reference number: S04008; PMID:89252033; PMID:2721673
A:Accession: S04008
A:Molecule type: protein
A:Residues: 97-114 <LAB>
R:Colella, R.; Bird, J.W.C.
Gene 130, 175-181, 1993
A>Title: Isolation and characterization of the chicken cystatin-encoding gene: Mapping to chromosome 1
A:Reference number: UN0789; PMID:93366172; PMID:8355684
A:Accession: UN0789
A:Molecule type: DNA
A:Residues: 1-139 <CO2>
A:Cross-references: GB:M55725
A>Note: authors failed to translate the codon for residue 115-Tyr
C:Comment: This protein binds tightly to and inhibits a variety of cysteine proteinases
C:Genetics:
A:Gene: Csn
A:introns: 76/3; 114/3
C:Superfamily: cystatin; cystatin homology
C:Keywords: cysteine proteinase inhibitor; egg white; phosphoprotein
F:1-23/Domains: signal sequence #status predicted <SIG>
F:24-139/Product: cystatin, long form #status experimental <CYLF>
F:30-139/Domains: cystatin homology <CVS>
F:32-139/Product: cystatin, short form #status experimental <CVSF>
F:76-80/Region: cystatin, inhibition site #status predicted
F:94-104, 118-138/disulfide bonds: #status experimental
F:103/Binding site: phosphate (Ser) (covalent) (partial) #status experimental

Query Match 34.6%; Score 154.5; DB 1; Length 139;
Best Local Similarity 38.3%; Pred. No. 4.4e-10;
Matches 31; Conservative 17; Mismatches 30; Indels 3; Gaps 2;

DY 1 QYNKESDQKHFRIRRVTLKVQRQVTDHLEHYHLNVMQMFTTCKP--ETTNCG-VPOERELH 57
 | | | | | : | | | | : | | | | : | | | | : | | | | :
DB 54 EYNRASNNKYSSRRVRVVISAKRLVSIGIKYLQVEIGRTCPKSGDLQSCEHFDEPEMA 113
 | | | | | : | | | | : | | | | : | | | | : | | | | :
DY 58 KOVNCFSPVPAPWPFQYKIL 78
 | | | | | : | | | | : | | | | : | | | | : | | | | :
DB 114 KYTTCTFWVYSIPMLNQIKL 134

RESULT 3
S10587
cystatin C - rat

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C:Species: Rattus sp. (rat)
C:Date: 21-Nov-1993 #sequence_revision 03-Nov-1995 #text_change 16-Jul-1999
C:Accession: S10587
R:Ennard, F.; Ennard, A.; Faucher, D.; Capony, J.P.; Derancourt, J.; Billard, M.; Gauthier, R.; Hoppe-Seyler, 371(Suppl.), 161-166, 1990
A:Title: Rat cystatin C: the complete amino acid sequence reveals a site for N-glycosylation
A:Reference number: S10587; PMID:90380276; PMID:2400517
A:Accession: S10587
A:Status: preliminary
A:Molecule type: protein
A:Residues: 1-120 <ESN>
A>Note: 43-Asn was also found
C:Superfamily: cystatin; cystatin homology
F:9-120/Domain: cystatin homology <CYS>

Query Match          34.0%; Score 151.5; DB 2; Length 120;
Best Local Similarity 39.2%; Pred. No. 8,1e-10;
Matches 29; Conservative 18; Mismatches 24; Indels 3; Gaps 2;

QY 1 QYNKSSDKYHRRIRFVYLKVGQVTDHLEYNLVNQMTTCQPEF--TNC-VQGEELH 57
      :|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|
Db 33 EYNKSNDAHYHRAIQVVARQQLVAGINYYLDVEMGRITCTKSQTLNCPFDQPHLM 92
      ::||::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|

QY 58 KQVNCFFSVFAVPM 71
      ::||::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|
Db 93 KVALCSFQIYSVPW 106
      ::||::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|

RESULT 4
S07085
Cystatin C precursor - rat (fragment)
C:Species: Rattus norvegicus (Norway rat)
C:Date: 01-Dec-1993 #sequence_revision 03-Aug-1995 #text_change 16-Jul-1999
C:Accession: S07085; S01337; S21109
R:Coile, T.; Dickson, P.W.; Ennard, F.; Averill, S.; Risbridger, G.P.; Gauthier, F.; Schreier, J. Biochem. 186, 35-42, 1989
A:Title: The cDNA structure and expression analysis of the genes for the cysteine proteinase
A:Reference number: S07085; PMID:90092122; PMID:2689174
A:Accession: S07085
A:Status: preliminary
A:Molecule type: mRNA
A:Residues: 1-127 <COL>
A:Cross-references: EMBL:X16957; NID:G56041; PIDD:CAA4831.1; PID:G736290
R:Ennard, A.; Ennard, F.; Faucher, D.; Gauthier, F.
FBBS Lett. 236, 475-478, 1988
A:Title: Two rat homologues of human cystatin C.
A:Reference number: S01337; PMID:88313020; PMID:3044831
A:Accession: S01337
A:Molecule type: protein
A:Residues: 8-49 <ESN>
R:Ennard, A.; Ennard, F.; Guillon, F.; Gauthier, F.
FBBS Lett. 300, 131-135, 1992
A:Title: Production of the cysteine proteinase inhibitor cystatin C by rat Sertoli cells
A:Reference number: S21109; PMID:92225121; PMID:1563513
A:Accession: S21109
A:Molecule type: protein
A:Residues: 8,'XX',11-20 <ES2>
C:Superfamily: cystatin; cystatin homology
C:Keywords: cysteine proteinase inhibitor
F:16-127/Domain: cystatin homology <CYS>
F:80-90,104-124/Disulfide bonds: #status predicted

Query Match          34.0%; Score 151.5; DB 2; Length 127;
Best Local Similarity 39.2%; Pred. No. 8,6e-10;
Matches 29; Conservative 18; Mismatches 24; Indels 3; Gaps 2;

QY 1 QYNKSSDKYHRRIRFVYLKVGQVTDHLEYNLVNQMTTCQPEF--TNC-VQGEELH 57
      :|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|
Db 40 EYNKSNDAHYHRAIQVVARQQLVAGINYYLDVEMGRITCTKSQTLNCPFDQPHLM 99
      ::||::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|

QY 58 KQVNCFFSVFAVPM 71
      ::||::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|

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Db 100 KRALCSFOIYSVPM 113

RESULT 5

UDHU

Cystatin C precursor [validated] - human
 N:Alternate names: gamma-CSF; gamma-trace; neuroendocrine basic polypeptide; post-gamma

C:Species: Homo sapiens (man)

C:Date: 06-Jul-1982 #sequence revision 31-Mar-1991 #text change 08-Dec-2000

C:Accession: S10216; S00004; J10095; A33400; S02751; A01270; A25434; S12288; A32732; A60

R:Abrahamson, M.; Olafsson, I.; Palsson, A.; Olafsson, M.; Lundwall, A.; Jensen, O.

Biochem. J. 268, 287-294, 1990

A:Title: Structure and expression of the human cystatin C gene.

A:Reference number: S10216; MUID:90303202; PMID:2363674

A:Accession: S10216

A:Molecule type: DNA

A:Residues: 1-146 <AB1>

A:Cross-references: EMBL:X52255; NID:g30257; PIDN:CAA36497.1; PID:g296643

R:Abrahamson, M.; Grubb, A.; Olafsson, I.; Lundwall, A.

FEBS Lett. 216, 229-233, 1987

A:Title: Molecular cloning and sequence analysis of cDNA coding for the precursor of the

A:Reference number: S00004; MUID:87219149; PMID:3495457

A:Accession: S00004

A:Molecule type: mRNA

A:Residues: 1-146 <AB2>

A:Cross-references: EMBL:X05607; NID:g30371; PIDN:CAA29096.1; PID:g755738

R:Levy, E.; Lopez-Otin, C.; Ghiso, J.; Galtner, D.; Frangione, B.

J. Exp. Med. 169, 1771-1778, 1989

A:Title: Stroke in Icelandic patients with hereditary amyloid angiopathy is related to a

A:Reference number: J10095; MUID:89235594; PMID:2541223

A:Accession: J10095

A:Molecule type: DNA

A:Residues: 1-146 <LEV>

A:Cross-references: GB:M61601; NID:g30367; PIDN:CAA43866.2; PID:g4490944

A>Note: the cystatin C gene isolated from the brain of an Icelandic patient with heredit

e)

R:Salich, E.; Sabatini, L.M.; Eddy, R.L.; Shows, T.B.; Azen, E.A.; Isemura, S.; Sanada,

Biochem. Biophys. Res. Commun. 162, 1324-1331, 1989

A:Title: The human cystatin C gene (CST3) is a member of the cystatin gene family which

A:Reference number: A33400; MUID:89350949; PMID:2764935

A:Accession: A33400

A:Molecule type: DNA

A:Residues: 1-24, 'T', 26-146 <SA1>

A:Cross-references: GB:M27889; GB:M27890; GB:M27891; NID:g181385; PIDN:AAA52164.1; PID:g

R:Ghisso, J.; Cowan, N.; Frangione, B.

Biol. Chem. Hoppe-Seyler 369, 205-208, 1988

A:Title: Isolation of a sequence encoding human cystatin C. Conservation of exon-intron

A:Reference number: S02751; MUID:89076507; PMID:3264504

A:Accession: S02751

A:Molecule type: DNA

A:Residues: 82-119 <GH2>

A:Cross-references: EMBL:M27769

A>Note: the authors translated the codon ACC for residue 105 as Thr; the sequence shown

R:Grubb, A.; Lofberg, H.

Proc. Natl. Acad. Sci. U.S.A. 83, 2974-2978, 1986

A:Title: Human gamma-trace, a basic microprotein: amino acid sequence and presence in th

A:Reference number: A01270; MUID:82222266; PMID:6283552

A:Accession: A01270

A:Molecule type: protein

A:Residues: 27-131, 'S', 133-146 <GRU>

R:Ghisso, J.; Jensen, O.; Frangione, B.

Proc. Natl. Acad. Sci. U.S.A. 83, 2974-2978, 1986

A:Title: Amyloid fibrils in hereditary cerebral hemorrhage with amyloidosis of Iceland t

A:Reference number: A25434; MUID:86206076; PMID:3517880

A:Accession: A25434

A:Molecule type: protein

A:Residues: 37-93, 'Q', 95-146 <GHI>

R:Turk, V.; Brzin, J.; Longor, M.; Ritonja, A.; Eropkin, M.; Borchart, U.; Machleidt, W.

Hoppe-Seyler's Z. Physiol. Chem. 364, 1487-1496, 1983 III. Amino-acid sequence of cystat

A:Residues: 27-73 <TUR>

R:Brzin, J.; Popovic, T.; Turk, V.

Biochem. Biophys. Res. Commun. 118, 103-109, 1984

A:Title: Human cystatin, a new protein inhibitor of cysteine proteinases.

A:Reference number: A32732; MUID:84128015; PMID:6365094

A:Accession: A32732

A:Molecule type: protein

A:Residues: 27-76 <BR2>

R:Olafsson, I.; Gudmundsson, G.; Abrahamson, M.; Jensen, O.; Grubb, A.

Scand. J. Clin. Lab. Invest. 50, 85-93, 1990

A:Title: The amino terminal portion of cerebrospinal fluid cystatin C in hereditary cyste

A:Reference number: A60552; MUID:90193615; PMID:2315647

A:Accession: A60552

A:Molecule type: protein

A:Residues: 27-49, 'XX', 52-64 <OLA>

A>Note: this protein, purified from cerebrospinal fluid of patients with the autosomal d

e defective gene is not present in CSF but is found instead in amyloid deposits

R:Popovic, T.; Brzin, J.; Ritonja, A.; Turk, V.

Biol. Chem. Hoppe-Seyler 371, 575-580, 1990

A:Title: Different forms of human cystatin C.

A:Reference number: S10607; MUID:91025625; PMID:2222856

A:Accession: S10607

A:Molecule type: protein

A:Residues: 27-53 <POP>

A:Experimental source: urine, kidney disease

A>Note: truncated forms with amino ends at positions 35 and 36 of the precursor were also

R:Grubb, A.; Lofberg, H.; Barrett, A.J.

FEBS Lett. 170, 370-374, 1984

A:Title: The disulphide bridges of human cystatin C (gamma-trace) and chicken cystatin.

A:Reference number: S01462

A:Contents: annotation; disulfide bonds

R:Berti, P.J.; Storer, A.C.

Biochem. J. 302, 411-415, 1994

A:Title: Local pH-dependent conformational changes leading to proteolytic susceptibility

A:Reference number: S55305; MUID:94379969; PMID:8092991

A:Accession: S55305

A:Status: preliminary

A:Molecule type: protein

A:Residues: 27-49, 5106-146 <BER>

C:Comment: This protein is found in the post-gamma-globulin fraction of cerebrospinal flu

I patients with certain autoimmune diseases.

C:Comment: This protein is an inhibitor of cysteine proteinases and may serve an importan

C:Genetics: A mutant cystatin C, with 94-Gln, is deposited in hereditary cerebral hemorr

A:Gene: GDB:CST3

A:Cross-references: GDB:119817; OMIM:105150

A:Map position: 20p11.2-20p11.2

A:Introns: 81/3; 119/3

C:Superfamily: cystatin; cystatin homology

F:1-26/Domain: signal sequence #status predicted <SIG>

F:27-146/Product: cystatin C #status experimental <MAT>

F:35-146/Domain: cystatin homology <CYS>

F:81-85/Region: inhibitory #status predicted

F:29/Modified site: hydroxyproline (Pro) (partial) #status experimental

F:99-109, 123-143/Disulfide bonds: #status experimental

Query Match

Best Local Similarity 32.6%; Score 145.5; DB 1; Length 146;

Matches 28; Conservative 16; Mismatches 27; Indels 3; Gaps 2;

QY 1 QYNKESDQKHFRIFRYLTKQROVTDLEHNLAVEMQWTCOK--PETTNC-VQGESEH 57

Db 59 EYNASDMSHSLDPLDVARAKOIVGVNYPDLDELARTCTYQPLDNCPRHDOPLK 118

QY 58 KQVNCFFSVFAPVPM 71

Db 119 KRAFCSFQIYAVPM 132

RESULT 6

B29632

cystatin SA precursor - human

C/Species: Homo sapiens (man)
 C/Date: 31-Mar-1989 #sequence revision 30-Jun-1989 #text_change 16-Jul-1999
 C/Accession: B29632; S02490; A14122; B27015
 R/Saitoh, E.; Kim, H.S.; Smithies, O.; Maeda, N.
 Gene 61, 329-338, 1987
 A/Title: Human cysteine-proteinase inhibitors: nucleotide sequence analysis of three men
 A/Reference number: A91589; MUID:88185836; PMID:3446578
 A/Accession: B29632
 A/Molecule type: DNA
 A/Residues: 1-141 <SA1>
 A/Cross-references: GB:M19673; GB:M19170; NID:G186403; PIDN:AAA36116.1; PID:G386826
 A/Note: The authors translated the codon GAC for residue 129 as Asn
 R/Saitoh, E.; Isemura, S.; Sanada, K.; Kim, H.S.; Smithies, O.; Maeda, N.
 Biol. Chem. Hoppe-Seyler 369, 191-197, 1988
 A/Title: Cystatin superfamily. Evidence that family II cystatin genes are evolutionarily
 A/Reference number: S02489; MUID:89076505; PMID:3202964
 A/Accession: S02490
 A/Status: not compared with conceptual translation
 A/Molecule type: DNA
 A/Residues: 21-141 <SA2>
 R/Isemura, S.; Saitoh, E.; Sanada, K.
 J. Biochem. 102, 693-704, 1987
 A/Title: Characterization and amino acid sequence of a new acidic cysteine proteinase in
 A/Reference number: A41422; MUID:88139220; PMID:3436950
 A/Accession: A41422
 A/Molecule type: protein
 A/Residues: 25-141 <ISE>
 R/Isemura, S.; Saitoh, E.; Sanada, K.; Ito, S.
 in Cysteine Proteinases and Their Inhibitors, Turk, V., ed., pp.497-505, Walter de Gruyter
 A/Title: Cystatin S and the related cysteine proteinase inhibitors in human saliva.
 A/Reference number: A27015
 A/Accession: B27015
 A/Molecule type: protein
 A/Residues: 25-134, 'D', 136-141 <ISE>
 C/Genetics:
 A/Gene: GDB:CST2
 A/Cross-references: GDB:119816; OMIM:123856
 A/Map position: 20p11.2-20p11.2
 C/Superfamily: cystatin; cystatin homology
 F/30-141/Domain: cystatin homology <CYS>

Query Match 32.4%; Score 144.5; DB 2; Length 141;
 Best Local Similarity 32.9%; Pred. No. 5.8e-09;
 Matches 27; Conservative 21; Mismatches 31; Indels 3; Gaps 2;

QY 1 QYNKESDDKXHFRIFRVLKQROVTDHLEHLNEMQWTCQK--PRTNCPQPER-ELH 57
 DB 54 EYNKATEDEYRRLRLVLRARQVGVNFFDIEVGRTICTKSQPNLDTCAFHQPELQ 113

QY 58 KQVNCPSVPAVPMPEQYKILN 79
 DB 114 KQQLCSFOIYEVPMEDMSLVN 135

RESULT 7
 A36163
 Cystatin C precursor - (mouse)
 C/Species: Mus musculus (house mouse)
 C/Date: 14-Dec-1990 #sequence_revision 14-Dec-1990 #text_change 16-Jul-1999
 C/Accession: A36163
 R/Solem, M.; Rawson, C.; Lindburg, K.; Barnes, D.
 Biochem. Biophys. Res. Commun. 172, 945-951, 1990
 A/Title: Transforming growth factor beta regulates cystatin C in serum-free mouse embryo
 A/Reference number: A36163; MUID:91054522; PMID:2241983
 A/Accession: A36163
 A/Status: preliminary
 A/Molecule type: mRNA
 A/Residues: 1-140 <SOL>
 A/Cross-references: EMBL:MS9470; NID:G192911; PIDN:AAA63298.1; PID:G192912
 C/Superfamily: cystatin; cystatin homology
 F/28-140/Domain: cystatin homology <CYS>
 F/93-103,117-137/Disulfide bonds: #status predicted

Query Match 31.1%; Score 138.5; DB 2; Length 140;
 Best Local Similarity 36.5%; Pred. No. 2.7e-08;
 Matches 27; Conservative 18; Mismatches 26; Indels 3; Gaps 2;

QY 1 QYNKESDDKXHFRIFRVLKQROVTDHLEHLNEMQWTCQKPE--TNC-VPQEREELH 57
 DB 53 EYNKGSNDAYHSAIQVVRARQVGVNFFDIEVGRTICTKSQNLDTCPFHQPELH 112

QY 58 KQVNCPSVPAVPM 71
 DB 113 KQQLCSFOIYVPM 126

RESULT 8
 UD80
 Cystatin - bovine
 N/Alternate names: thiol proteinase inhibitor
 C/Species: Bos primigenius taurus (cattle)
 C/Date: 28-Feb-1986 #sequence_revision 28-Feb-1986 #text_change 06-Dec-1996
 C/Accession: A01271
 R/Hirado, M.; Tsunawasa, S.; Sakiyama, F.; Nishibe, M.; Fujii, S.
 FEBS Lett. 186, 41-45, 1985
 A/Title: Complete amino acid sequence of bovine colostrum low-M-r cysteine proteinase in
 A/Reference number: A01271; MUID:85231205; PMID:3891407
 A/Accession: A01271
 A/Molecule type: protein
 A/Residues: 1-112 <HIR>
 C/Superfamily: cystatin; cystatin homology
 C/Keywords: colostrum; cysteine proteinase inhibitor
 F/2-112/Domain: cystatin homology <CYS>
 F/46-52/Region: inhibitory #status predicted
 F/66-76,90-110/Disulfide bonds: #status predicted

Query Match 29.9%; Score 133.5; DB 1; Length 112;
 Best Local Similarity 32.1%; Pred. No. 7.7e-08;
 Matches 26; Conservative 19; Mismatches 33; Indels 3; Gaps 2;

QY 1 QYNKESDDKXHFRIFRVLKQROVTDHLEHLNEMQWTCQKPE--NC-VPQEREELH 57
 DB 26 EFNKRSNDAYQSRVVRVRRARQVSGMNFVLVEIGRTTCTKSQNLDTCPFHQPELH 85

QY 58 KQVNCPSVPAVPMPEQYKILN 78
 DB 86 REKLCSFOYVVPMTINLV 106

RESULT 9
 UD80P1
 Cystatin S precursor - human
 N/Alternate names: cystatin SA-III; salivary acidic protein-1
 C/Species: Homo sapiens (man)
 C/Date: 25-Feb-1985 #sequence_revision 08-Feb-1996 #text_change 16-Jul-1999
 C/Accession: S17667; S16500; A01272; A29603; S19280; A56608
 R/Bobek, L.A.; Aguirre, A.; Levine, M.J.
 Biochem. J. 278, 627-635, 1991
 A/Title: Human salivary cystatin S. Cloning, sequence analysis, hybridization in situ and
 A/Reference number: S17667; MUID:91378918; PMID:1898352
 A/Accession: S17667
 A/Molecule type: mRNA
 A/Residues: 1-141 <BOB>
 A/Cross-references: EMBL:X54667; NID:G30365; PIDN:CMA3478.1; PID:G30366
 R/Lamkin, M.S.; Jensen, J.L.; Setayesh, M.R.; Troxler, R.F.; Oppenheim, F.G.
 Arch. Biochem. Biophys. 288, 664-670, 1991
 A/Title: Salivary cystatin SA-III: a potential precursor of the acquired enamel pellicle,
 A/Reference number: S16500; MUID:91378515; PMID:1898055
 A/Accession: S16500
 A/Status: preliminary
 A/Molecule type: protein
 A/Residues: 21-134, 'D', 136-141 <INU>
 R/Isemura, S.; Saitoh, E.; Sanada, K.
 J. Biochem. 96, 489-498, 1984
 A/Title: Isolation and amino acid sequence of SP-1, an acidic protein of human whole saliv
 A/Reference number: A91985; MUID:85054716; PMID:6501254

A:Accession: A01272
A:Molecule type: protein
A:Residues: 29-134/D, 136-141 <ISE>
J:Riseamura, S.; Satoh, E.; Ito, S.; Iseamura, M.; Sanada, K.
J: Biochem. 96, 1311-1314, 1984
A:Title: Cystatin S: a cysteine proteinase inhibitor of human saliva.
A:Reference number: A91981; MUID:85104877; PMID:6394600
A:Contents: annotation; inhibitor specificity
R:Haake, D.H.; Yuan, P.M.; Wilson, K.J.; Hunkapiller, M.W.
Biochem. Biophys. Res. Commun. 145, 1248-1253, 1987
A:Title: Identification of a long form of cystatin from human saliva by rapid microbore
A:Reference number: A29603; MUID:87270697; PMID:3496880
A:Accession: A29603
A:Molecule type: protein
A:Residues: 21-51 <HAM>
R:Ramasubbu, N.; Reddy, M.S.; Bergey, E.J.; Haraazthy, G.G.; Soni, S.D.; Levine, M.J.
Biochem. J. 280, 341-352, 1991
A:Title: Large-scale purification and characterization of the major phosphoproteins and
A:Reference number: S19279; MUID:92082469; PMID:1747107
A:Accession: S19280
A:Status: preliminary
A:Molecule type: protein
A:Residues: 21-55 <RAM>
R:Johnson, M.; Richardson, C.F.; Bergey, E.J.; Levine, M.J.; Nancollas, G.H.
Arch. Oral Biol. 36, 631-636, 1991
A:Title: The effects of human salivary cystatins and statherin on hydroxyapatite crystal
A:Reference number: A56608; MUID:92074898; PMID:1741693
A:Accession: A56608
A:Molecule type: protein
A:Residues: 21-36 <JOH>
A:Note: sequence extracted from NCBI backbone (NCBI:67866)
A:Note: authors designate form without phosphate as cystatin S and form containing one ph
C:Comment: This protein strongly inhibits papain and ficin, partially inhibits stem brom
competitively.
C:Genetics:
A:Gene: GDB:CSR4
A:Cross-references: GDB:136381
A:Map position: 20p11.2-20p11.2
C:Superfamily: cystatin; cystatin homology
C:Keywords: cysteine proteinase inhibitor; phosphoprotein; saliva
F:1-20/Domain: signal sequence #status predicted <SIG>
F:21-141/Product: cystatin S #status predicted <MAT>
F:30-141/Domain: cystatin homology <CTS>
F:76-80/Region: inhibitory #status predicted
F:94-104,118-138/Disulfide bonds: #status predicted

Query Match 29.5%; Score 131.5; DB 1; Length 141;
Best Local Similarity 32.9%; Pred. No. 1.6e-07;
Matches 27; Conservative 19; Mismatches 33; Indels 3; Gaps 2;

QY 1 QYNKESDQKVFRIPLRVLVKQVQVTDHLEHILNEMQWTTQCK--PETTNCVQDER-ELH 57
:|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
Db 54 EYNKATDEYVRRPLQVLRAREQRTGCGVNFYFDVSGVTICTKSPNLDTCAPHFQPELQ 113
:|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
QY 58 KQVNCFSVFVAVNPFQYKIIN 79
:|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
Db 114 KKQLCSFEIYVPEWEDRSLVN 135
:|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|

RESULT 10
UDHD02
cystatin SN precursor [validated] - human
N:Alternate names: cystatin SA-I
C:Species: Homo sapiens (man)
C:Date: 28-May-1996 #sequence revision 08-Feb-1996 #text_change 08-Dec-2000
C:Accession: A28110; S02489; A28632; A01273; S19279
J:Al-Hashimi, I.; Dickson, D.P.; Levine, M.J.
J: Biol. Chem. 263, 9381-9387, 1988
A:Title: Purification, molecular cloning, and sequencing of salivary cystatin SA-I.
A:Reference number: A28110; MUID:88243825; PMID:2837486
A:Accession: A28110
A:Molecule type: mRNA
A:Residues: 1-141 <ALH>

A:Cross-references: GB:J03870; NID:G337751; PIDN:AA60299.1; PID:G337752
R:Saitoh, E.; Isemura, S.; Sanada, K.; Kim, H.S.; Smithies, O.; Maeda, N.
Biol. Chem. Hoppe-Seyler 369, 191-197, 1988
A>Title: Cystatin superfamily. Evidence that family II cystatin genes are evolutionarily
A:Reference number: S02489; MUID:89076505; PMID:3202964
A:Accession: S02489
A>Status: not compared with conceptual translation
A:Molecule type: DNA
A:Residues: 21-141 <SA2>
R:Saitoh, E.; Kim, H.S.; Smithies, O.; Maeda, N.
Gene 61, 329-338, 1987
A>Title: Human cysteine-proteinase inhibitors: nucleotide sequence analysis of three mem
A:Reference number: A91589; MUID:88185836; PMID:3446578
A:Accession: A29632
A:Molecule type: DNA
A:Residues: 1-86, 1', 88-141 <SAI>
R:Isemura, S.; Saitoh, E.; Sanada, K.
FEBS Lett. 198, 145-149, 1986
A>Title: Characterization of a new cysteine proteinase inhibitor of human saliva, cystati
A:Reference number: A01273; MUID:86164938; PMID:3514272
A:Accession: A01273
A:Molecule type: protein
A:Residues: 29-141 <ISB>
R:Ramashubbu, N.; Reddy, M.S.; Bergey, E.J.; Harasethy, G.G.; Soni, S.D.; Levine, M.J.
Biochem. J. 280, 341-352, 1991
A>Title: Large-scale purification and characterization of the major phosphoproteins and n
A:Reference number: S19279; MUID:92082469; PMID:1747107
A:Accession: S19279
A>Status: preliminary
A:Molecule type: protein
A:Residues: 21-55 <RAM>
C:Comment: Human saliva appears to contain several cysteine proteinase inhibitors that an
ences. Cystatin SN, with a pI of 7.5, is a much better inhibitor of papain and dipeptidyl)
C:Genetics:
A:Gene: GDB:CS71
A:Cross-references: GDB:119815; OMIM:123855
A:Map position: 20p11.2-20p11.2
C:Superfamily: cystatin; cystatin homology
C:Keywords: cysteine proteinase inhibitor; extracellular protein; saliva
F:1-20/Domains: signal sequence #status predicted <SIG>
F:21-141/Product: cystatin SA-I #status experimental <MAT1>
F:29-141/Product: cystatin SN #status experimental <MAT2>
F:30-141/Domains: cystatin homology <CYS>
F:76-80/Region: inhibitory #status predicted
F:94-104, 118-138/Disulfide bonds: #status predicted

Query Match 28.1%; Score 125.5; DB 1; Length 141;
Beet Local Similarity 36.5%; Pred.No. 7.7e-07;
Matches 27; Conservative 13; Mismatches 31; Indels 3; Gaps 2;

DQ 1 QYNKSDDKYHFRIRVLAKVQRQVDLHEYLHNVENMQTTCK--PETTNCVPQER-ELH 57
 :|||::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|
Db 54 ENKATKDYYRRPLRLVLRARQTVGGVVYFPFDVBVGRICTKSQNLDTCARHQRELO 113
 ::|||::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|

DQ 58 KQVNCFSVFAYFW 71
 :|||::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|

Db 114 KKQLCSFYIEYEW 127

RESULT 11
A28793
cystatin - puff adder
C:Species: Bittis arlicans (puff adder)
C>Date: 15-Dec-1988 #sequence_revision 15-Dec-1988 #ext_change 30-Sep-1993
C:Accession: A28793
R:Ricorda, A.; Evans, H.J.; Machleidt, W.; Barrett, A.J.
Biochem. J. 246, 799-802, 1997
A>Title: Amino acid sequence of a cystatin from venom of the African puff adder (Bittis au
A:Reference number: A28793; MUID:88076861; PMID:3500714
A:Accession: A28793
A:Molecule type: protein
A:Residues: 1-111 <RTY>
C:Superfamily: cystatin; cystatin homology

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: March 23, 2004, 17:05:08 ; Search time 9.03766 Seconds
(without alignments)
460.917 Million cell updates/sec

Title: US-09-941-314-15

Perfect score: 446

Sequence: 1 QYKESDDKHFRIPRVLVK.....NCFPSVFAVPMFOYKILNK 80

Scoring table: BLOSUM62
Gapop 10.0 , Gapept 0.5

Searched: 141681 seqs, 52070155 residues

Total number of hits satisfying chosen parameters: 141681

Minimum DB seq length: 0

Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : SwissProt_42.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	446	100.0	137	CS11_HUMAN	O9H112 homo sapien
2	278	62.3	139	CS11_MOUSE	O9H112 homo musculus
3	199.5	44.7	142	CS18_MOUSE	P32766 mus musculus
4	187.5	42.0	142	CS18_RAT	O88969 ratu mus
5	174.5	39.1	142	CS18_HUMAN	O60676 homo sapien
6	155.5	34.9	148	CYT8_RABIT	O97862 corycolagus
7	154.5	34.6	139	CYT8_CHICK	P01038 gallus galli
8	151.5	34.0	127	CYT8_RAT	P14841 ratu mus
9	149.5	33.5	116	CYT8_GOTJA	P01061 coturnix co
10	148.5	33.3	146	CYT8_SALISC	O19093 salmali sci
11	145.5	32.6	146	CYT8_HUMAN	P01034 homo sapien
12	144.5	32.4	141	CYT8_HUMAN	P09228 homo sapien
13	144.5	32.4	146	CYT8_MACMU	O19092 macaca mula
14	142.5	32.0	140	CYT8_MOUSE	P21460 mus musculus
15	138	30.9	165	CS11_HUMAN	O9H114 homo sapien
16	133.5	29.9	148	CYT8_BOVIN	P01035 bos taurus
17	131.5	29.5	141	CYT8_HUMAN	P01033 homo sapien
18	125.5	28.1	141	CYT8_HUMAN	P01037 homo sapien
19	123	27.6	111	CYT8_BITAR	P08933 bitis arlet
20	122	27.4	129	CYT8_HUMAN	P35481 cyprinus ca
21	118	26.5	142	CYT8_HUMAN	P08328 homo sapien
22	112.5	25.2	149	CYT8_HUMAN	O15828 homo sapien
23	110	24.7	147	CYT8_HUMAN	O9H491 homo sapien
24	106	23.8	145	CYT8_HUMAN	O76096 homo sapien
25	104	23.3	141	CYT8_RAT	P19313 ratu mus
26	99	22.2	130	CYT8_ONCMY	O91195 oncorhynch
27	98	22.0	130	CYT8_ONCMY	O98967 oncorhynch
28	97.5	21.9	434	CS11_MOUSE	P01047 bos taurus
29	97.5	21.9	619	CS11_MOUSE	P01048 bos taurus
30	96.5	21.6	436	CS11_MOUSE	P01046 bos taurus
31	96.5	21.6	621	CS11_MOUSE	P01044 bos taurus
32	96	21.5	137	CYT8_MOUSE	O92046 mus musculus
33	96	21.5	144	CYT8_MOUSE	O99099 mus musculus

34	95.5	21.4	162	1	CYT8_ONCMY	P22085 onchocerca
35	91.5	20.5	644	1	CS11_HUMAN	P01042 homo sapien
36	84	18.8	639	1	CS11_HUMAN	P08934 ratu mus
37	79	17.7	661	1	CS11_MOUSE	O08677 mus musculus
38	78	17.5	430	1	CS11_RAT	P08932 ratu mus
39	76	17.0	430	1	CS11_RAT	P01048 ratu mus
40	68	15.2	99	1	CYT8_NAJAT	P01714 naja atra
41	66.5	14.9	625	1	CS11_HUMAN	O92544 homo sapien
42	65	14.6	602	1	CS11_MOUSE	P22437 mus musculus
43	64	14.3	915	1	CS11_HUMAN	P27967 hordeum vol
44	63.5	14.2	455	1	CS11_MOUSE	O18179 caenorhabdit
45	63	14.1	438	1	CS11_MOUSE	P29717 candida alb

ALIGNMENTS

RESULT 1
ID CS11_HUMAN STANDARD; PRT; 137 AA.
AC O9H112; O9H113;
DT 28-FEB-2003 (Rel. 41, Created)
DT 28-FEB-2003 (Rel. 41, Last sequence update)
DE 28-FEB-2003 (Rel. 41, Last annotation update)
DE Cytatatin 11 precursor.
GN CS11 OR CS18.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Homiidae; Homo.
OX NCBI_Taxid=9606;
RN [1]
RP SEQUENCE FROM N.A. (ISOFORMS 1 AND 2).
RX MEDLINE=21638749; PubMed=11780052;
RA Deloukas P., Matthews L.H., Ashurst J., Burton J., Gilbert J.G.R.,
RA Jones M., Stavrides G., Almeida J.P., Babbage A.K., Baggaley C.L.,
RA Bailey J., Barlow K.F., Bates K.N., Beard L.M., Beare D.M.,
RA Beasley O.P., Bird C.P., Blakey S.E., Bridgman A.M., Brown A.J.,
RA Buck D., Burrill W.D., Butler A.P., Carter C., Carter N.P.,
RA Chapman J.C., Clamp M., Clark G., Clark L.N., Clark S.Y., Clee C.M.,
RA Clegg S., Cobley V.E., Collier R.E., Connor R.E., Corby N.R.,
RA Coulson A., Coville G.J., Deadman R., Dharm P.D., Dunn M.,
RA Ellington A.G., Frankland J.A., Frazer A.A., French L., Garner P.,
RA Graffham D.V., Griffiths C., Griffiths M.N.D., Gwilliam R., Hall R.E.,
RA Hammond S., Harley J.L., Heath P.D., Ho S., Holden J.L., Howden P.J.,
RA Huckle E., Hunt A.R., Hunt S.E., Jekosch K., Johnson C.M., Johnson D.,
RA Kay M.P., Kimberley A.M., King A., Knights A., Laird G.K., Lawlor S.,
RA Leiva-Salido M.H., Leverisha M.A., Lloyd C., Lloyd D.M., Lovell J.D.,
RA Marsh V.L., Martin S.L., McComachie L.J., McElay K., McMurtry A.A.,
RA Milne S.A., Mistry D., Moore M.J.F., Mullikin J.C., Nickerson T.,
RA Oliver K., Parker A., Patel R., Pearce T.A.V., Peck A.I.,
RA Phillimore B.J.C.T., Prathalingam S.R., Plumb R.W., Ramsey H.,
RA Rice C.M., Ross M.T., Scott C.E., Sehra H.K., Showkeen R., Sims S.,
RA Skuse C.D., Smith M.L., Soderlund C., Steward C.A., Sultston J.E.,
RA Swann R.M., Symcote N., Taylor R., Tee L., Thomas D.W., Thorpe A.,
RA Tracey A., Tromans A.C., Vaudin M., Wall M., Wallis J.M.,
RA Whitehead S.L., Whitaker P., Willey D.L., Williams L., Williams S.A.,
RA Wilming L., Wray P.W., Hubbard T., Durbin R.M., Bentley D.R., Beck S.,
RA Rogers J.;
RT "The DNA sequence and comparative analysis of human chromosome 20.";
RL Nature 414:665-671(2001).
CC -1- SUBCELLULAR LOCATION: Secreted (Potential).
CC -1- ALTERNATIVE PRODUCTS:
CC Event=Alternative splicing; Named isoforms=2;
CC Name=1;
CC IsoId=O9H112-1; Sequence=Displayed;
CC Name=2;
CC IsoId=O9H112-2; Sequence=VSP_001260;
CC Note=No experimental confirmation available;
CC -1- SIMILARITY: Belongs to the cystatin family.
CC -----
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CC -----

DR EMBL; AL096677; CAC13170.1; -
 DR EMBL; AL096677; CAC17423.1; -
 DR HSSP; P01038; 1A90.
 DR Genew; HGNC:15959; CS211.
 DR InterPro; IPR000010; Cystatin.
 DR Pfam; PF00031; cystatin; 1.
 DR SMART; SM00043; CY 1.
 DR PROSITE; PS00287; CYSTATIN; FALSE_NEG.
 DR Thiol protease inhibitor; Signal; Alternative splicing.
 FT CHAIN 1 25
 FT SIGNAL 1 25
 FT SITE 26 137
 FT DISULFID 93 101
 FT DISULFID 114 134
 FT CARBOHYD 131 131
 FT VARSPLIC 76 110
 FT MISSING (in isoform 2).
 FT FTID=VSP_001260.
 SQ SEQUENCE 137 AA; 16375 MW; C58568C3A585C3B CRC64;

Query Match 100.0%; Score 446; DB 1; Length 137;
 Best Local Similarity 100.0%; Pred. No. 1.2e-44;
 Matches 80; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 QYNKESDCKHFRFVRLKQVOTDHLVHLENVEMQTTCKQRETNVCVPOREELHKOV 60
 DB 53 QYNKESDCKHFRFVRLKQVOTDHLVHLENVEMQTTCKQRETNVCVPOREELHKOV 112

QY 61 NCFEVSFAVPWFPEQYKILNK 80
 DB 113 NCFEVSFAVPWFPEQYKILNK 132

Db 113 NCFEVSFAVPWFPEQYKILNK 132

RESULT 2
 CS11_MOUSE STANDARD; PRT; 139 AA.

ID CS11_MOUSE
 AC 09D269;
 DT 28-FEB-2003 (Rel. 41, Created)
 DT 28-FEB-2003 (Rel. 41, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Cystatin 11 precursor.
 GN CS211.
 OS Mus musculus (Mouse).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
 NCBI_TaxID=10090;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN=C57BL/6J; TISSUE=Epididymis;
 RX MEDLINE=21085660; PubMed=11217851;
 RA Kawai T., Shingawa A., Shibata K., Yoshino M., Itoh M., Iehi Y.,
 RA Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamana K.,
 RA Saito T., Okazaki Y., Gotohori T., Bono H., Kasukawa T., Saito R.,
 RA Kadoya K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
 RA Fleischnann W., Gaasterland T., Gissi C., King B., Kochwa H.,
 RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
 RA Schirml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,
 RA Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Baren G.,
 RA Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
 RA Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
 RA Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
 RA Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,
 RA Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
 RA Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
 RA Suzuki H., Toyooka K., Wang K.H., Weitz C., Whitaker C., Wilming L.,
 RA Wynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohetsuki S.,
 RA Hayashizaki Y.,
 RT Functional annotation of a full-length mouse cDNA collection."

RL Nature 409:685-690(2001).
 CC -1- SUBCELLULAR LOCATION: Secreted (Potential).
 CC -1- SIMILARITY: Belongs to the cystatin family.
 CC -----

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CC -----

DR EMBL; AK020300; BA832061.1; -
 DR HSSP; P01034; 1G96.
 DR MGD; MGI:1925490; Cst11.
 DR InterPro; IPR000010; Cystatin.
 DR Pfam; PF00031; cystatin; 1.
 DR SMART; SM00043; CY 1.
 DR PROSITE; PS00287; CYSTATIN; FALSE_NEG.
 DR Thiol protease inhibitor; Signal.
 FT CHAIN 1 28
 FT SIGNAL 1 28
 FT SITE 29 139
 FT DISULFID 94 102
 FT DISULFID 115 135
 FT CARBOHYD 134 134
 FT N-LINKED (GLCNAC. . .) (POTENTIAL).
 SQ SEQUENCE 139 AA; 16217 MW; F228D9815FA32640 CRC64;

Query Match 62.3%; Score 278; DB 1; Length 139;
 Best Local Similarity 60.0%; Pred. No. 3.2e-25;
 Matches 48; Conservative 16; Mismatches 16; Indels 0; Gaps 0;

QY 1 QYNKESDCKHFRFVRLKQVOTDHLVHLENVEMQTTCKQRETNVCVPOREELHKOV 60
 DB 54 EYKKSSEDLYNFRILRLTKMKQVGTGHLVHLENVEMQTTCKQRETNVCVPOREELHKOV 113

QY 61 NCFEVSFAVPWFPEQYKILNK 80
 DB 114 QCYFVSVAIPWVEFKILNK 133

Db 114 QCYFVSVAIPWVEFKILNK 133

RESULT 3
 CS18_MOUSE STANDARD; PRT; 142 AA.

ID CS18_MOUSE
 AC P32766; O89102;
 DT 01-OCT-1993 (Rel. 27, Created)
 DT 30-MAY-2000 (Rel. 39, Last sequence update)
 DT 28-FEB-2003 (Rel. 41, Last annotation update)
 DE Cystatin-related epididymal spermatozoal protein precursor (Cystatin-
 DE related epididymal specific protein) (Cystatin 8).
 GN CS28 OR CRES.
 OS Mus musculus (Mouse).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
 NCBI_TaxID=10090;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN=C3H, and CD-1;
 RX MEDLINE=99247899; PubMed=10229662;
 RA Cornwell G.A., Hsia N., Sutton H.G.,
 RA "Structure, alternative splicing and chromosomal localization of the
 RA cystatin-related epididymal spermatozoal gene."
 RL Biochem. J. 340:85-93(1999).
 RN [2]
 RP SEQUENCE OF 4-142 FROM N.A.
 RC TISSUE=Epididymis;
 RX MEDLINE=93078799; PubMed=1280328;
 RA Cornwell G.A., Orgebin-Crist M.-C., Hann S.R.,
 RT "The CRES gene: a unique testis-regulated gene related to the cystatin
 RT of the mouse epididymis."
 RT Mol. Endocrinol. 6:1653-1664(1992).
 RL -1- FUNCTION: Performs a specialized role during sperm development and

CC maturation.

CC -1- SUBCELLULAR LOCATION: Secreted.

CC -1- TISSUE SPECIFICITY: Proximal caput region of the epididymis. Lower

CC expression in the testis. Within the testis it is localized to the

CC elongating spermatids, whereas within the epididymis it is

CC exclusively synthesized by the proximal caput epididulum.

CC -1- INDUCTION: Testicular factors or hormones other than androgens

CC present in the testicular fluid may be involved in the regulation

CC of CRIS gene expression.

CC -1- SIMILARITY: Belongs to the cystatin family.

CC -----

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DR EMBL; AF091503; AAC61754.1; -

DR EMBL; AF090691; AAC36316.1; -

DR EMBL; A49926; AAC35390.1; -

DR PIR; A45361; A45361.

DR HSSP; P01034; 1G96.

DR MGD; MGI:107161; Cc8b.

DR InterPro; IPR000010; Cystatin.

DR Pfam; PF00031; cystatin; 1.

DR SMART; SM00043; CY; 1.

DR KJ Thiol protease inhibitor; Signal.

FT SIGNAL 1 19 POTENTIAL.

FT CHAIN 20 142 CYSTATIN-RELATED EPIDIDYMAL SPERMATOGENIC

FT PROTEIN.

FT SITE 77 81 SECONDARY AREA OF CONTACT (POTENTIAL).

FT DISULFID 95 105 BY SIMILARITY.

FT DISULFID 119 139 BY SIMILARITY.

FT CARBOHYD 39 39 N-LINKED (GLCNAC. . .) (POTENTIAL).

FT CARBOHYD 100 100 N-LINKED (GLCNAC. . .) (POTENTIAL).

FT CONFLICT 4 15 PUMSL1.P1P1P -> GRDEQVGSOK (IN REF. 2).

SQ SEQUENCE 142 AA; 16288 MW; 50B446B98F6673B CRC64;

Query Match 44.7%; Score 199.5; DB 1; Length 142;

Best Local Similarity 42.2%; Pred. No. 3.9e-16;

Matches 35; Conservative 25; Mismatches 20; Indels 3; Gaps 2.

QY 1 QYNKESDDKXFRIRPRVLKVRQVTDHLEHMLNEMQWTTCKP--ETTNCVPOER-ELH 57

Db 55 EYNKESEDKYFVLVDKILHAQLQIDRMVEYQIDVQISNCKNCPPLANTENCIPOKKPELE 114

QY 58 KQVNCFSFVFAVPWFQYKIILNK 80

Db 115 KQWCSFLVGLALPWNGEFNLISK 137

RESULT 4

CST8_RAT STANDARD; PRT; 142 AA.

AC O88969;

DT 30-MAY-2000 (Rel. 39, Created)

DT 30-MAY-2000 (Rel. 39, Last sequence update)

DT 10-OCT-2003 (Rel. 42, Last annotation update)

DE Cystatin-related epididymal spermatogenic protein precursor (Cystatin

DE 8).

DE CST8 OR CRES.

GN Rattus norvegicus (Rat).

OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.

OC NCB1_TaxID=10116;

OC (1)

RP SEQUENCE FROM N.A.

RP STRAIN=Sprague-Dawley; TISSUE=Epididymis;

RX MEDLINE=99247899; PubMed=10229662;

RA Cornwall G.A., Heia N., Burton H.G.;

FT "Structure, alternative splicing and chromosomal localization of the

CC CC cysctatin-related epididymal spermatogenic gene.";

Rt Biochem J. 340:85-93(1999).

-I- FUNCTION: Performs a specialized role during sperm development and maturation.

-I- SUBCELLULAR LOCATION: Secreted (By similarity).

-I- SIMILARITY: Belongs to the cystatin family.

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DR EMBL; AF090692; AAC6317.1; .

DR HSSP; P01034; I596.

DR InterPro; IPRO00010; Cystatin.

DR Pfam; PF00031; cystcatin; 1.

DR SMART; SMO0043; CY; 1.

KW Thiol protease inhibitor; Signal.

FT SIGNAL 1 19 POTENTIAL.

FT CHAIN 20 142 CYSTATIN-RELATED EPIDIDYMAL SPERMATOGENIC PROTEIN.

FT SITE 77 81 SECONDARY AREA OF CONTACT (POTENTIAL).

FT DISULFID 95 105 BY SIMILARITY.

FT DISULFID 119 139 BY SIMILARITY.

FT CARBOHYD 100 100 N-LINKED (GLCNAC..) (POTENTIAL) .

SQ SEQUENCE 142 AA; 16246 MW; F6873FAA6BCAB34 CRC64;

Query Match 42.0%; Score 187.5; DB 1; Length 142;
Best Local Similarity 41.0%; Pred. No. 9.5e-15;
Matches 34; Conservative 23; Mismatches 23; Indels 3; Gaps 2;

Oy 1 QYNKESDDKHFRIFRVLAKVQRVTDLHLYEYLVNEMQTTCOKP--ETTNVCVPER-ELH 57
|||::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|:
Db 55 EYNGSEDKTLFLDKLTLLHTLTDTTDMEHHIVDIQSRSNCRKNTANENCIPGKNPLLE 114
||::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|:

Oy 58 KQNVCFPSVAVPWPFGQYKIANK 80
||||::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|:

Db 115 KKJSCSFLVGALPNWGSEFDLLSK 137
||::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|:

RESULT 5

CST8_HUMAN STANDARD; PRT; 142 AA.
O60676;

Dt 30-MAY-2000 (Rel. 39, Created)
Dt 30-MAY-2000 (Rel. 39, Last sequence update)
Dt 28-FEB-2003 (Rel. 41, Last annotation update)

De Cystatin-related epididymal spermatic protein precursor (Cystatin 8).

Cn CST8 OR CRIS.

Os Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Hominiidae; Homo.
OX NCBI_TaxID=9606;
[1]
RN TITLE=FROM N.A.
RC TISSUE=Testis;
RX MEDLINE=95344753; PubMed=7619504;
RA Cornwall G.A., Hann S.R.;
"Transient appearance of CRIS protein during spermatogenesis and caput epididymal sperm maturation."
RL Mol. Reprod. Dev. 41:37-46(1995).
[2]

RN SEQUENCE FROM N.A.
RP MEDLINE=21638749; PubMed=11780052;
RA Deloukas P., Matthews L.H., Ashurst J., Burton J., Gilbert J.G.R., Jones M., Stavrides G., Almeida J.P., Babbage A.K., Baguley C.L., Bailey J., Barlow K.F., Bates K.N., Beard L.M., Beare D.M., Beasley O.P., Bird C.P., Blakey S.E., Bridgman A.M., Brown A.J., Buck D., Burrill W.D., Butler A.P., Carder C., Carter N.P.,

ID	CYT_C RABIT	STANDARD;	PRT;	148 AA.
AC	097852;			
DT	16-OCT-2001 (Rel. 40, Created)			
DT	16-OCT-2001 (Rel. 40, Last sequence update)			
DT	28-FEB-2003 (Rel. 41, Last annotation update)			
DE	Cystatin C precursor.			
GN	CSr3.			
OS	Oryctolagus cuniculus (Rabbit).			
OC	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;			
OC	Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.			
OX	NCBI_TaxID=9986;			
RN	[1]			
RP	SEQUENCE FROM N.A.			
RC	STRAIN=Japanese white; TISSUE=Bone;			
RX	MEDLINE=98424349; PubMed=9753427;			
RA	Kobori M., Ireda Y., Nara H., Kato M., Kumegawa M., Nojima H.,			
RA	Kawashima H.;			
RT	"Large scale isolation of osteoclast-specific genes by an improved			
RT	method involving the preparation of a subtracted cDNA library.";			
RL	Genes Cells 3:459-475(1998).			
CC	-I- FUNCTION: This is a thiol proteinase inhibitor.			
CC	-I- SIMILARITY: Belongs to the cystatin family.			
CC	-----			
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CC	entities requires a license agreement (See http://www.isb-sib.ch/announce/			
CC	or send an email to license@isb-sib.ch).			
CC	-----			
DR	EMBL; AB009342; BAA75921.1; -.			
DR	HSSP; P01034; 1G96.			
DR	InterPro; IPR00010; Cystatin.			
DR	Pfam; PF00031; cystatin, 1.			
DR	SMART; SM00043; Cy. 1.			
DR	PROSITE; PS00287; CYSTATIN; FALSE_NEG.			
KW	Thiol proteinase inhibitor; Signal.			
FT	SIGNAL	1	28	POTENTIAL.
FT	CHAIN	29	148	CYSTATIN C.
FT	ACT SITE	39	39	REACTIVE SITE.
FT	SITE	83	87	SECONDARY AREA OF CONTACT.
FT	DISULFID	101	111	BY SIMILARITY.
FT	DISULFID	125	145	BY SIMILARITY.
SQ	SEQUENCE	148 AA;	16346 MW;	1523CB311695S89A CRC64;
Query March		34.9%;	Score 155.5;	DB 1; Length 148;
Best Local Similarity		34.6%;	Pred. No. 5e-11;	
Matches	28;	Conservative	24;	Mismatches 26; Indels 3; Gaps 2;
QY	1 QYNKSDDKYHFRILFVLKVOQVTDHLEHYLNLVEMQWTTQCKEPT--TNC-VQOERELH 57			
DB	61 EYNKSGNDRYSRSLAQVVARQRCIVSGVKYLDVLIGRTTCTKTQTNLANCPHPDQDPLQ 120			
QY	58 KQVNCFSVFAVPWFQEQKIL 78			
DB	121 KQMLCSFEIYSVPLNKISL 141			

OX NCBI_TaxID=9031;
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=90008673; PubMed=2793849;
 RA Colella R., Sakaguchi Y., Nagase H., Bird J.W.C.;
 RT "Chicken egg white cystatin. Molecular cloning, nucleotide sequence,
 RL and tissue distribution.";
 RN J. Biol. Chem. 264:17164-17169 (1989).
 [2]
 RP SEQUENCE OF 24-139.
 RX MEDLINE=94178305; PubMed=6712597;
 RA Schwabe C., Anastasi A., Crow H., McDonald J.K., Barrett A.J.;
 RT "Cystatin. Amino acid sequence and possible secondary structure.";
 RN Biochem. J. 217:813-817 (1984).
 [3]
 RP SEQUENCE OF 24-139.
 RX MEDLINE=94110059; PubMed=6662498;
 RA Turk V., Brzin J., Longer M., Ritonja A., Eropkin M., Borchart U.,
 RA Machleidt W.;
 RT "Protein inhibitors of cysteine proteinases. III. Amino-acid sequence
 RL of cystatin from chicken egg white.";
 RN Hoppe-Seyler's Z. Physiol. Chem. 364:1467-1496 (1983).
 [4]
 RP CHARACTERIZATION OF PROTEIN.
 RX MEDLINE=93256421; PubMed=6409085;
 RA Anastasi A., Brown M.A., Kembhavi A.A., Nicklin M.J.H., Sayers C.A.,
 RA Sunter D.C., Barrett A.J.;
 RT "Cystatin, a protein inhibitor of cysteine proteinases. Improved
 RL purification from egg white, characterization, and detection in
 RN chicken serum.";
 RN Biochem. J. 211:129-138 (1983).
 [5]
 RP DISULFIDE BONDS.
 RA Grubb A., Loebberg H., Barrett A.J.;
 RT "The disulphide bridges of human cystatin C (gamma-trace) and chicken
 RL cystatin.";
 RN FEBS Lett. 170:370-374 (1984).
 [6]
 RP PHOSPHORYLATION.
 RX MEDLINE=99252033; PubMed=2721673;
 RA Luber B., Krieglstein K., Henschen A., Kos J., Turk V., Huber R.,
 RA Bode W.;
 RT "The cysteine proteinase inhibitor chicken cystatin is a
 RL phosphoprotein.";
 RN FEBS Lett. 248:162-168 (1989).
 [7]
 RP X-RAY CRYSTALLOGRAPHY (2.0 ANGSTROMS).
 RX MEDLINE=99052676; PubMed=3191914;
 RA Bode W., Engh R., Musil D., Thiele U., Huber R., Karshikov A.,
 RA Brzin J., Kos J., Turk V.;
 RT "The 2.0 A X-ray crystal structure of chicken egg white cystatin and
 RL its possible mode of interaction with cysteine proteinases.";
 RN EMBO J. 7:2593-2599 (1988).
 [8]
 RP STRUCTURE BY NMR.
 RX MEDLINE=94087719; PubMed=8263912;
 RA Dieckmann T., Mitschang L., Hofmann M., Kos J., Turk V.,
 RA Auerwald E.A., Jeanluc R., Oeschkinat H.;
 RT "The structures of native phosphorylated chicken cystatin and of a
 RL recombinant unphosphorylated variant in solution.";
 RN J. Mol. Biol. 234:1048-1059 (1993).
 [9]
 RP FUNCTION: This protein binds tightly to and inhibits a variety of
 CC thiol processes including ficin, papain, and cathepsins B, C, H,
 CC and L. Although isolated from egg white, it is also present in
 CC serum.
 CC -1- SIMILARITY: Belongs to the cystatin family.
 CC
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 CC -----
 DR EMBL: J05077; AAA48744.1; -.
 DR PIR: A34456; UNCH.
 DR PDB: 1CEW; 31-JUN-94.
 DR PDB: 1A67; 27-MAY-98.
 DR PDB: 1A90; 17-JUN-98.
 DR InterPro: IPR000010; Cystatin.
 DR Pfam: PF00031; Cystatin; 1.
 DR SMART: SM00043; CY.1.
 DR PROSITE: PS00287; CYSTATIN, 1.
 DR Thiol protease inhibitor; Phosphorylation; Signal; 3D-structure.
 FT SIGNAL 1 23
 FT CHAIN 24 139
 FT ACT SITE 32 32
 FT SITE 76 80
 FT DISULFID 94 104
 FT DISULFID 118 138
 FT MOD RES 103 103
 FT STRAND 35 36
 FT TURN 39 40
 FT HELIX 42 51
 FT TURN 52 52
 FT HELIX 53 56
 FT TURN 57 58
 FT STRAND 63 77
 FT STRAND 81 95
 FT TURN 96 97
 FT TURN 99 100
 FT HELIX 101 108
 FT STRAND 115 125
 FT TURN 126 129
 FT STRAND 130 139
 SQ SEQUENCE 139 AA; 15287 MW; D92D1131C4D37891 CRC64;
 Query Match 34.6%; Score 154.5; DB 1; Length 139;
 Best Local Similarity 38.3%; Pred. No. 6,1e-11;
 Matches 31; Conservative 17; Mismatches 30; Indels 3; Gaps 2;
 QY 1 QYNESDQKXFRIFRFLVKVQGVTDHLEHYLVNEMQWTCQKP--ETNVC-VQERELH 57
 DB 54 EYRASNDKYSRRVRIASAKROLVSGIKYILQVEIGRTICPKSSGDLQSCFHDPEEMA 113
 QY 58 KQVNCFFSVPAVWPFEQYKL 78
 DB 114 KYTTCFVVSIPWLNQIKL 134
 RESULT 8
 CYTC RAT STANDARD; PRT; 127 AA.
 ID CYTC RAT
 AC P14841;
 DT 01-APR-1990 (Rel. 14, Created)
 DT 01-APR-1990 (Rel. 14, Last sequence update)
 DT 28-FEB-2003 (Rel. 41, Last annotation update)
 DE Cystatin C precursor (Fragment).
 GN C5T3.
 OS Rattus norvegicus (Rat).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
 CC NCBI_TaxID=10116;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN=BuFfalo;
 RX MEDLINE=90092122; PubMed=2689174;
 RA Cole T., Dickson P.W., Barnard F., Averill F., Riebridger G.,
 RA Gauthier F., Schreiber G.;
 RT "The cDNA structure and expression analysis of the genes for the
 RT cysteine proteinase inhibitor cystatin C and for beta 2-microglobulin
 RL in rat brain.";
 RN Eur. J. Biochem. 186:35-42 (1989).
 [2]
 RP SEQUENCE OF 8-127.

RX MEDLINE=90380276; PubMed=2400577;
 RA Benard F., Benard A., Faucher D., Capony J.-P., Derancourt J.,
 RA Billard M., Gauthier F.;
 RT "rat cystatin C: the complete amino acid sequence reveals a site for
 RT N-glycosylation.";
 RL Biol. Chem. Hoppe-Seyler 371:161-166(1990).
 RN [3]
 RP SEQUENCE OF 8-49.
 RX MEDLINE=88313020; PubMed=3044831;
 RA Benard A., Benard F., Faucher D., Gauthier F.;
 RT "Two rat homologues of human cystatin C.";
 RL FEBS Lett. 236:475-478(1988).
 RN [4]
 RP SEQUENCE OF 8-20.
 RC TISSUE=seroli cells;
 RX MEDLINE=92225121; PubMed=1563513;
 RA Benard A., Benard F., Guillou F., Gauthier F.;
 RT "Production of the cysteine proteinase inhibitor cystatin C by rat
 RT seroli cells.";
 RL FEBS Lett. 300:131-135(1992).
 CC -1- FUNCTION: As an inhibitor of cysteine proteinases, this protein is
 CC thought to serve an important physiological role as a local
 CC regulator of this enzyme activity. Known to inhibit cathepsin B,
 CC H, and L.
 CC -1- SIMILARITY: Belongs to the cystatin family.
 CC -----
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 CC -----
 DR EMBL, X16957; CA34831.1; -.
 DR PIR, S07085; S07085.
 DR PIR, S10587; S10587.
 DR HSSP; P01034; 1G96.
 DR InterPro: IPR000010; Cystatin.
 DR Pfam; PF00031; cystatin; 1.
 DR SMART; SM00043; CY, 1.
 DR PROSITE; PS00287; CYSTATIN, 1.
 DR K101 protease inhibitor; Signal.
 FT SIGNAL 1 1
 FT NON TER 1 1
 FT CHAIN 1 127
 FT ACT SITE 18 127
 FT SITE 62 66
 FT DISULFID 80 90
 FT DISULFID 104 124
 FT CONFLICT 25 25
 SQ SEQUENCE 127 AA; 14039 MW; 78F70158B7925853 CRC64;
 Query Match 34.0%; Score 151.5; DB 1; Length 127;
 Best Local Similarity 39.2%; Pred. No. 1.2e-10;
 Matches 29; Conservative 18; Mismatches 24; Indels 3; Gaps 2;
 QY 1 QYNKESDDKXHFIFRYLAKQROVTDLEHYHLNEMQMTTCOK--TNC-VQGEELH 57
 Db 40 EYKNGSDAHSRAIQVRRARAKOLVAGINYYLDVEMGRITCTKQTNLTNCPFDOPHLM 99
 QY 58 KQVNCFFSVFAVPM 71
 Db 100 KQALCSFOIYSVP 113
 RESULT 9
 CYT_COTUA STANDARD; PRT; 116 AA.
 AC P81061;
 DT 15-JUL-1998 (Rel. 36, Created)
 DT 15-JUL-1998 (Rel. 36, Last sequence update)
 DT 28-FEB-2003 (Rel. 41, Last annotation update)

DE Cystatin (Egg-white cystatin).
 OS Coturnix coturnix japonica (Japanese quail).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Actinoptera; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
 OC Coturnix.
 OX NCBI_TaxID=93934;
 RN [1]
 RP SEQUENCE.
 RC TISSUE=Egg white;
 RX MEDLINE=97420480; PubMed=9276465;
 RA Gerhartz B., Bugh R.A., Mentele R., Eckerskorn C., Torquato R.,
 RA Wiltman J., Kold H.J., Machleidt W., Fritz H., Auerwald E.A.;
 RT "Quail cystatin: Isolation and characterization of a new member of
 RT the cystatin family and its hypothetical interaction with cathepsin
 RT B.";
 RL FEBS Lett. 412:551-556(1997).
 CC -1- FUNCTION: This protein binds tightly to and inhibits papain and
 CC cathepsin B.
 CC -1- SIMILARITY: Belongs to the cystatin family.
 CC -----
 DR HSSP; P01038; ICEW.
 DR InterPro: IPR000010; Cystatin.
 DR Pfam; PF00031; cystatin; 1.
 DR SMART; SM00043; CY, 1.
 DR PROSITE; PS00287; CYSTATIN, 1.
 DR K101 protease inhibitor; Phosphorylation.
 FT ACT SITE 9 9
 FT SITE 53 57
 FT DISULFID 71 81
 FT DISULFID 95 115
 FT MOD_RES 80 80
 SQ SEQUENCE 116 AA; 13093 MW; 48248621053A2F70 CRC64;
 Query Match 33.5%; Score 149.5; DB 1; Length 116;
 Best Local Similarity 35.8%; Pred. No. 1.9e-10;
 Matches 29; Conservative 19; Mismatches 30; Indels 3; Gaps 2;
 QY 1 QYNKESDDKXHFIFRYLAKQROVTDLEHYHLNEMQMTTCOK--PETTNC-VQGEELH 57
 Db 31 EYKNGSDKXSSVVRIRISAKQQLVSGIKYIMEIERTTCPSASDLAGCEPFIDEEMA 90
 QY 58 KQVNCFFSVFAVPMFEQYKIL 78
 Db 91 KYTTCNFVYSIPMLNQIKLL 111
 RESULT 10
 CYT_SATSC STANDARD; PRT; 146 AA.
 ID CYTC_SATSC
 AC O19093;
 DT 15-JUL-1998 (Rel. 36, Created)
 DT 15-JUL-1998 (Rel. 36, Last sequence update)
 DT 28-FEB-2003 (Rel. 41, Last annotation update)
 DE Cystatin C precursor.
 GN CST3.
 OS Saimiri sciureus (Common squirrel monkey).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Primates; Platyrrhini; Cebidae; Cebinae; Saimiri.
 OX NCBI_TaxID=9521;
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=97054523; PubMed=8898820;
 RA Wei L.H., Walker L.C., Levy E.;
 RT "Cystatin C, Icelandic-like mutation in an animal model of
 RT cerebrovascular beta-amyloidosis.";
 RL Stroke 27:2080-2085(1996).
 CC -1- FUNCTION: As an inhibitor of cysteine proteinases, this protein is
 CC thought to serve an important physiological role as a local
 CC regulator of this enzyme activity.
 CC -1- SIMILARITY: Belongs to the cystatin family.
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DR EMBL; U52028; AAB64051.1; -
 DR HSSP; P01034; 1G96.
 DR InterPro: IPR000010; Cystatin.
 DR Pfam; PF00031; cystatin; 1.
 DR SMART; SM00043; CY; 1.
 DR PROSITE; PS00287; CYSTATIN; 1.
 KM Thiol protease inhibitor; Amyloid; Signal.
 FT SIGNAL 1 26 BY SIMILARITY.
 FT CHAIN 27 146 CYSTATIN C.
 FT ACT_SITE 37 37 REACTIVE SITE.
 FT SITE 81 85 SECONDARY AREA OF CONTACT.
 FT DISULFID 99 109 BY SIMILARITY.
 FT DISULFID 123 143 BY SIMILARITY.
 SQ SEQUENCE 146 AA; 15946 MW; 08196353C0306AA3 CRC64;

Query Match 33.3%; Score 148.5; DB 1; Length 146;
 Best Local Similarity 39.2%; Pred. No. 3.2e-10;
 Matches 29; Conservative 16; Mismatches 26; Indels 3; Gaps 2;

QY 1 QYKESDQKHFRFRVLKXQROVTDLEHNLNEMQWTCOK--PETNCGPER-ELH 57
 DB 59 EYKASIDMHSRLQVAVRARKQIVAGVNFLLDVEKRTCTTKNQPLDNCPPHEQPHLK 118
 QY 58 KQVNCPSFVPAFVW 71
 DB 119 RKAFCSFOIYSVPR 132

RESULT 11
 ID CYTC_HUMAN STANDARD; PRT; 146 AA.
 AC P01034;
 DT 21-JUL-1986 (Rel. 01, Created)
 DT 01-AUG-1988 (Rel. 08, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Cystatin C precursor (Neuroendocrine basic polypeptide) (Gamma-trace)
 DE (Post-gamma-globulin).
 GN CST3.
 OS Homo sapiens (Human).
 OS Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 OX NCBI_TaxID=9606;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Placenta;
 RX MEDLINE=87219149; PubMed=3495457;
 RA Abrahamson M., Grubb A., Olafsson I., Lundvall A.;
 RT "Molecular cloning and sequence analysis of cDNA coding for the
 RT precursor of the human cysteine proteinase inhibitor cystatin C.";
 RL FEBS Lett. 216:229-233(1987).
 RN [2]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Leukocyte;
 RX MEDLINE=90303202; PubMed=2363674;
 RA Abrahamson M., Olafsson I., Paleodottir A., Ulvshaek M., Lundvall A.;
 RT "Structure and expression of the human cystatin C gene.";
 RL Biochem. J. 268:287-294(1990).
 RN [3]
 RP SEQUENCE FROM N.A. (HCHWA VARIANT).
 RC TISSUE=Brain;
 RX MEDLINE=89235594; PubMed=2541223;
 RA Levy E., Lopez-Otin C., Ghiso J., Galtner D., Frangione B.;
 RT "Stroke in Icelandic patients with hereditary amyloid angiopathy is
 RT related to a mutation in the cystatin C gene, an inhibitor of
 RT cysteine proteases.";
 RL J. Exp. Med. 169:1771-1778(1989).
 RN [4]

RP SEQUENCE FROM N.A.
 RX MEDLINE=89350949; PubMed=2764935;
 RA Saito E., Sabatini L.M., Eddy R.L., Shows T.B., Azen E.A.,
 RA Iemura S., Sanada K.;
 RT "The human cystatin C gene (CST3) is a member of the cystatin gene
 RT family which is localized on chromosome 20.";
 RL Biochem. Biophys. Res. Commun. 162:1324-1331(1989).
 RN [5]
 RP SEQUENCE FROM N.A.
 RA Dickinson D.P., Hewett-Emmett D., Thiesse M.;
 RT "Acquisition of complex patterns of differential expression in
 RT epithelial cell populations during the evolution of type 2 cystatin
 RT genes.";
 RL Submitted (NOV-2000) to the EMBL/GenBank/DBJ databases.
 RN [6]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=21638749; PubMed=11780052;
 RA Deloukas P., Matthews L.H., Ashurst J., Burton J., Gilbert J.G.R.,
 RA Jones M., Stavrides G., Almeida J.P., Babbage A.K., Bagguley C.L.,
 RA Bailey J., Barlow K.P., Bates K.N., Beard L.M., Beare D.M.,
 RA Beasley O.P., Bird C.P., Blakey S.E., Bridgeman A.M., Brown A.J.,
 RA Buck D., Burrill W.D., Butler A.P., Carder C., Carter N.P.,
 RA Chapman J.C., Clamp M., Clark G., Clark L.N., Clark S.Y., Clee C.M.,
 RA Clegg S., Cobley V.E., Collier R.E., Connor R.E., Corby N.R.,
 RA Coulson A., Coville G.J., Deadman R., Dhami P.D., Dunn M.,
 RA Ellington A.G., Frankland J.A., Fraser A., French L., Garner P.,
 RA Graffham D.V., Griffiths C., Griffiths M.N.D., Gwilliam R., Hall R.E.,
 RA Hammond S., Harley J.B., Heath P.D., Ho S., Holden J.L., Howden P.J.,
 RA Huckle E., Hunt A.R., Hunt S.E., Jekosch K., Johnson C.M., Johnson D.,
 RA Kay M.P., Kimberley A.M., King A., Knights K., Laird G.K., Lawlor S.,
 RA Leharasliho M.H., Leverhwa M.A., Lloyd C., Lloyd D.M., Lovell J.D.,
 RA Marsh V.L., Martin S.L., McComachie L.J., McEay K., McMurtry A.A.,
 RA Milne S.A., Mistry D., Moore M.J.F., Muliklin J.C., Nickerson T.,
 RA Oliver K., Parker A., Patel R., Pearce T.A.V., Peck A.I.,
 RA Philimore B.J.C.T., Prathalingam S.R., Plumb R.W., Ramsey H.,
 RA Rice C.M., Rose M.T., Scott C.B., Sehra H.K., Showkeen R., Sims S.,
 RA Skuce C.D., Smith M.L., Soderlund C., Steward C.A., Sultson J.,
 RA Swann R.M., Sycamore N., Taylor R., Tee L., Thomas D.W., Thorpe A.,
 RA Tracey A., Tromane A.C., Vaudin M., Wall M., Wallis J.M.,
 RA Whitehead S.L., Whitaker P., Willey D.L., Williams L., Williams S.A.,
 RA Wilming L., Wray P.W., Hubbard T., Durbin R.M., Bentley D.R., Beck S.,
 RA Rogers J.;
 RT "The DNA sequence and comparative analysis of human chromosome 20.";
 RL Nature 414:865-871(2001).
 RN [7]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Brain;
 RX MEDLINE=22388257; PubMed=12477932;
 RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
 RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
 RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
 RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
 RA Diatchenko L., Marsina K., Farmer A.A., Rubin G.M., Hong L.,
 RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
 RA Brownstein M.J., Udén T.B., Toshiyuki S., Carninci P., Prange C.,
 RA Rana S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mulhally S.J.,
 RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
 RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Huiyk S.W.,
 RA Villalón D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
 RA Pabey J., Holtz E., Ketterman M., Madan A., Rodriguez S., Sanchez A.,
 RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
 RA Blakeley R.W., Touchman J.W., Green E.D., Dickson M.C.,
 RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
 RA Butterfield Y.S.N., Krzywinski M.I., Skalek U., Smillie D.E.,
 RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
 RT "Generation and initial analysis of more than 15,000 full-length
 RT human and mouse cDNA sequences.";
 RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
 RN [8]
 RP SEQUENCE OF 27-146.
 RX MEDLINE=82222268; PubMed=6283552;
 RA Grubb A., Loeffberg H.;
 RT "Human gamma-trace, a basic microprotein: amino acid sequence and

RT presence in the adenohipophysis.";
 RL Proc. Natl. Acad. Sci. U.S.A. 79:3024-3027(1982).
 RN [9]
 RP SEQUENCE OF 27-73.
 RX MEDLINE=84110059; PubMed=6662498;
 RA Turk V., Brzin J., Longer M., Ritonja A., Eropkin M., Borchart U.,
 Machleidt W.;
 RT "Protein inhibitors of cysteine proteinases. III. Amino-acid sequence
 of cystatin from chicken egg white.";
 RL Hoppe-Seyler's Z. Physiol. Chem. 364:1487-1496(1983).
 RN [10]
 RP SEQUENCE OF 27-76.
 RX MEDLINE=84128015; PubMed=6365094;
 RA Brzin J., Popovic T., Turk V.;
 RT "Human cystatin, a new protein inhibitor of cysteine proteinases.";
 RL Biochem. Biophys. Res. Commun. 118:103-109(1984).
 RN [11]
 RP DISULFIDE BONDS.
 RA Grubb A., Loeffberg H., Barrett A.J.;
 RT "The disulphide bridges of human cystatin C (gamma-trace) and chicken
 cystatin.";
 RL FEBS Lett. 170:370-374(1984).
 RN [12]
 RP X-RAY CRYSTALLOGRAPHY (2.50 ANGSTROMS) OF 27-146.
 RX MEDLINE=21173909; PubMed=11276250;
 RA Janowski R., Kozak M., Jankowska E., Grzonka Z., Grubb A.,
 Abrahamson M., Jaskolski M.;
 RT "Human cystatin C, an amyloidogenic protein, dimerizes through
 three-dimensional domain swapping.";
 RL Nat. Struct. Biol. 8:316-320(2001).
 RN [13]
 RP VARIANT GLN-94.
 RX MEDLINE=92316504; PubMed=1352269;
 RA Abrahamson M., Jonsdottir S., Olafsson I., Jansson O., Grubb A.;
 RT "Hereditary cystatin C amyloid angiopathy: identification of the
 disease-causing mutation and specific diagnosis by polymerase chain
 reaction based analysis.";
 RL Hum. Genet. 89:377-380(1992).
 CC -1- FUNCTION: As an inhibitor of cysteine proteinases, this protein is
 thought to serve an important physiological role as a local
 regulator of this enzyme activity.
 CC -1- SUBUNIT: Homodimer.
 CC -1- TISSUE SPECIFICITY: Expressed in highest levels in the epididymis,
 vas deferens, brain, thymus, and ovary and the lowest in the
 submandibular gland.
 CC -1- DISEASE: Defects in CST3 are a cause of hereditary cerebral
 hemorrhage with amyloidosis (HCHWA) [MIM:105150]; also known as
 cerebral amyloid angiopathy (CAA) or cerebroarterial amyloidosis
 Icelandic type. HCHWA is characterized by a thickening of the
 cerebral arteries walls with deposition of material with the
 characteristics of amyloid.
 CC -1- SIMILARITY: Belongs to the cystatin family.
 CC -----
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 CC -----
 DR EMBL; X05607; CAA29096.1; -;
 DR EMBL; X52255; CAA36497.1; -;
 DR EMBL; M27891; AAA52164.1; -;
 DR EMBL; M27889; AAA52164.1; JOINED.
 DR EMBL; M27890; AAA52164.1; JOINED.
 DR EMBL; X61681; CAA43856.2; -;
 DR EMBL; X61682; CAA43856.2; JOINED.
 DR EMBL; X61683; CAA43856.2; JOINED.
 DR EMBL; A019564; AAK1570.1; -;
 DR EMBL; ALJ21894; CAC05424.1; -;
 DR EMBL; BC013083; AAA13083.1; -;
 DR PIR; S10216; UDHU.

DR PDB; 1G96; 06-APR-01.
 DR Genew; HGNC:2475; CST3.
 DR MIM; 604312; -;
 DR MIM; 105150; -;
 DR InterPro; IPR000010; Cystatin.
 DR Pfam; PF00031; cystatin; 1.
 DR SMART; SM00043; CY; 1.
 DR PROSITE; PS00287; CYSTATIN; 1.
 KW Thiol protease inhibitor; Amyloid; Signal; Disease mutation;
 KW Polymorphism; 3D-structure.
 FT SIGNAL 1 26
 FT CHAIN 27 146
 FT ACT_SITE 37 37
 FT SITE 81 85
 FT DISULFID 99 109
 FT DISULFID 123 143
 Query Match 32.6%; Score 145.5; DB 1; Length 146;
 Best Local Similarity 37.8%; Pred. No. 7e-10;
 Matches 28; Conservative 16; Mismatches 27; Indels 3; Gaps 2;
 QY 1 QYAKESDQKHFRIPIRYLAKYQROVDHLEVLNEMQWTCOK--PETTNC-VPOEREHL 57
 DB 59 EYNKASDMYHSALQVRAKQIVAGVNYFLDVELGRTTCTQRPVLDNCPRHDPHLK 118
 QY 58 KQVNCFSVFAVPM 71
 DB 119 RKAFCSPQIVAVPM 132
 RESULT 12
 CYTT HUMAN STANDARD; PRT; 141 AA.
 AC P09228; Q9UC07;
 DT 01-MAR-1989 (Rel. 10, Created)
 DT 01-MAR-1989 (Rel. 10, Last sequence update)
 DT 28-FEB-2003 (Rel. 41, Last annotation update)
 DE Cystatin SA precursor (Cystatin S5).
 GN CST3.
 OS Homo sapiens (Human).
 OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.
 OX NCBI_TaxID=9606;
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=88185836; PubMed=3446578;
 RA Satoh E., Kim H.-S., Smithies O., Maeda N.;
 RT "Human cysteine-proteinase inhibitors: nucleotide sequence analysis
 of three members of the cystatin gene family.";
 RL Gene 61:329-338(1987).
 RN [2]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=21638749; PubMed=11780052;
 RA Deloukas P., Matthews L.H., Ashurst J., Burton J., Gilbert J.G.R.,
 Jones M., Stavrides G., Almeida J.P., Babbage A.K., Baguley C.L.,
 Bailey J., Barlow K.F., Bates K.N., Beard L.M., Beare D.M.,
 Beasley O.P., Bird C.P., Blakey S.E., Bridgeman A.M., Brown A.J.,
 Buck D., Burrill W.D., Butler A.P., Carder C., Carter N.P.,
 Chapman J.C., Clamp M., Clark G., Clark L.N., Clark S.Y., Clee C.M.,
 Clegg S., Cobley V.E., Collier R.E., Connor R.D., Corby N.R.,
 Coulson A., Coville G.J., Deadman R., Dhami P.D., Dunn M.,
 Ellington A.G., Frankland J.A., Fraser A., French L., Garner P.,
 Graffham D.V., Griffiths C., Griffiths M.N.D., Gwilliam R., Hall R.E.,
 Hammond S., Harley J.L., Heath P.D., Ho S., Holden J.L., Howden P.J.,
 Huckle E., Hunt A.R., Hunt S.E., Jekosch K., Johnson C.M., Johnson D.,
 Kay M.P., Kimberley A.M., King A., Knights A., Laird G.K., Lawlor S.,
 Leibaeslahti M.H., Leverisha M.A., Lloyd C., Lloyd D.M., Lovell J.D.,
 Marsh V.L., Martin S.L., McConnell L.J., McInerney A.A.,
 Milne S.A., Mistry D., Moore M.J.F., Mullikin J.C., Nickerson T.,
 Oliver K., Parker A., Patel R., Pearce T.A.V., Peck A.I.,
 Phillimore B.J.C.T., Prathalingam S.R., Plumb R.W., Rameay H.,
 Rice C.M., Rose M.T., Scott C.E., Sehra H.K., Showkhen R., Sims S.,
 Skuce C.D., Smith M.L., Soderlund C., Steward C.A., Sulston J.E.,

RA Swann R.M., Sycamore N., Taylor R., Tee L., Thomas D.W., Thorpe A.,
 RA Trecey A., Tromans A.C., Vaudin M., Wall M., Wallis J.M.,
 RA Whitehead S.L., Whitaker P., Willey D.L., Williams L., Williams S.A.,
 RA Wilming L., Wray P.W., Hubbard T., Durbin R.M., Bentley D.R., Beck S.,
 RA Rogers J.;
 RT "The DNA sequence and comparative analysis of human chromosome 20.";
 RL Nature 414:865-871(2001).
 RN [3]
 RP SEQUENCE OF 21-40.
 RC TISSUE=Saliva;
 RX MEDLINE=92138674; PubMed=1778989;
 RA Isemura S., Satoh E., Sanada K., Minakata K.;
 RT "Identification of full-sized forms of salivary (S-type) cystatins
 (cystatin SN, cystatin SA, cystatin S, and two phosphorylated forms of
 cystatin S) in human whole saliva and determination of phosphorylation
 sites of cystatin S.";
 RL J. Biochem. 110:648-654(1991).
 RN [4]
 RP SEQUENCE OF 25-141.
 RX MEDLINE=88139220; PubMed=3436950;
 RA Isemura S., Satoh E., Sanada K.;
 RT "Characterization and amino acid sequence of a new acidic cysteine
 proteinase inhibitor (cystatin SA) structurally closely related to
 cystatin S, from human whole saliva.";
 RL J. Biochem. 102:693-704(1987).
 RN [5]
 RP PRELIMINARY SEQUENCE OF 25-141.
 RA Isemura S., Satoh E., Sanada K., Isemura M., Ito S.;
 RT "Characterization and amino acid sequence of a new acidic cysteine
 proteinase inhibitor (cystatin SA) structurally closely related to
 cystatin S, from human whole saliva.";
 RL (in) Turk V. (eds.);
 RL Cysteine proteinases and their inhibitors, pp.497-505,
 RL Walter de Gruyter, Berlin and New York (1986).
 RN [6]
 RP SEQUENCE OF 25-141 FROM N.A.
 RX MEDLINE=89076505; PubMed=3202964;
 RA Satoh E., Isemura S., Sanada K., Kim H.-S., Smithies O., Maeda N.;
 RT "Cystatin superfamily. Evidence that family II cystatin genes are
 evolutionarily related to family III cystatin genes.";
 RL Biol. Chem. Hoppe-Seyler 369:191-197(1988).
 CC -1- FUNCTION: Thiol protease inhibitor.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- SIMILARITY: Belongs to the cystatin family.
 CC -----
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 CC -----
 DR EMBL: M19673; AAA36116.1; -;
 DR EMBL: M19673; AAA36116.1; JOINED.
 DR EMBL: M19672; AAA36116.1; JOINED.
 DR EMBL: AL591074; CAC94784.1; -;
 DR PIR: B29632; B29632.
 DR HSBP: P01034; I996.
 DR Genew: HGNC:2474; CST2.
 DR MIM: 123856; -;
 DR GO: GO:0004869; F:cysteine protease inhibitor activity; TAS.
 DR InterPro: IPR000010; Cystatin.
 DR Pfam: PF00031; Cystatin; 1.
 DR SMART: SM00043; CY; 1.
 DR PROSITE: PS00287; CYSTATIN; 1.
 KW Thiol protease inhibitor; Signal; Multigene family.
 FT SIGNAL 1 20
 FT CHAIN 21 141 CYSTATIN SA.
 FT ACT_SITE 32 32 REACTIVE SITE.
 FT SITE 76 80 SECONDARY AREA OF CONTACT.
 FT DISULFID 94 104 BY SIMILARITY.
 FT DISULFID 118 138 BY SIMILARITY.

SQ SEQUENCE 141 AA; 16445 MW; EB54915B1B779A2A2 CRC64;
 Query Match 32.4%; Score 144.5; DB 1; Length 141;
 Best Local Similarity 32.9%; Pred. No. 8.6e-10;
 Matches 27; Conservative 21; Mismatches 31; Indels 3; Gaps 2;
 QY 1 QYNKESDDKXHFRIFRVLKQVQVTDHLEVHLNVEKMTTCOK--PETTCVPOER-ELH 57
 DB 54 EYKATDEYRRLLRLRLRAREQIVGVGNVFPDIEVGRTICTSQPHLDCAFPHEQELQ 113
 QY 58 KQVNCFFSVFAVPMFEQYKTLN 79
 DB 114 KQVNCFFSVFAVPMFEQYKTLN 135
 RESULT 13
 ID CYTC MACMU STANDARD; PRT; 146 AA.
 AC 019092;
 DT 15-JUL-1998 (Rel. 36, Created)
 DT 15-JUL-1998 (Rel. 36, Last sequence update)
 DE 28-FEB-2003 (Rel. 41, Last annotation update)
 DE Cystatin C precursor.
 OS CS73.
 GN Macaca mulatta (Rhesus macaque).
 OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Primates; Catarrhini; Cercopithecoidea;
 OC Cercopithecinae; Macaca.
 ON NCBI_TaxID=9544;
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=97054523; PubMed=8898820;
 RA Wei L.H., Walker L.C., Levy E.;
 RT "Cystatin C. Icelandic-like mutation in an animal model of
 RT cerebrovascular beta-amyloidosis.";
 RL Stroke 27:2080-2085(1996).
 CC -1- FUNCTION: As an inhibitor of cysteine proteinases, this protein is
 CC thought to serve an important physiological role as a local
 CC regulator of this enzyme activity.
 CC -1- SIMILARITY: Belongs to the cystatin family.
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 CC -----
 DR EMBL: U51912; AB64050.1; -;
 DR HSBP: P01034; I996.
 DR InterPro: IPR000010; Cystatin.
 DR Pfam: PF00031; Cystatin; 1.
 DR SMART: SM00043; CY; 1.
 DR PROSITE: PS00287; CYSTATIN; 1.
 KW Thiol protease inhibitor; Amyloid; Signal.
 FT SIGNAL 1 26
 FT CHAIN 27 146
 FT ACT_SITE 37 37 REACTIVE SITE.
 FT SITE 81 85 SECONDARY AREA OF CONTACT.
 FT DISULFID 99 109 BY SIMILARITY.
 FT DISULFID 123 143 BY SIMILARITY.
 SQ SEQUENCE 146 AA; 15857 MW; F0B3BB774A29DF26 CRC64;
 Query Match 32.4%; Score 144.5; DB 1; Length 146;
 Best Local Similarity 37.8%; Pred. No. 9.2e-10;
 Matches 28; Conservative 16; Mismatches 27; Indels 3; Gaps 2;
 QY 1 QYNKESDDKXHFRIFRVLKQVQVTDHLEVHLNVEKMTTCOK--PETTCVPOER-ELH 57
 DB 59 EYKASDMDXHBALGVARKQIVAGVNYFLVDELRTCTCTQPHLDCAFPHEQPHLK 118
 QY 58 KQVNCFFSVFAVPM 71

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Db      119 RKAFCSFQIYTPW 132

RESULT 14
CYTC_MOUSE STANDARD; PRT; 140 AA.
ID CYTC_MOUSE
AC P21460;
DT 01-MAY-1991 (Rel. 18, Created)
DT 01-FEB-1996 (Rel. 33, Last sequence update)
DT 10-OCT-2003 (Rel. 42, Last annotation update)
DE Cystatin C precursor (Cystatin 3).
GN Cst3.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN
RP SEQUENCE FROM N.A.
RC STRAIN=BALB/c; TISSUE=Brain;
RX MEDLINE=91054522; PubMed=2241983;
RA Solem M., Rawson C., Lindburg K., Barnes D.;
RT "transforming growth factor beta regulates cystatin C in serum-free
RT mouse embryo (SfME) cells.";
RL Biochem. Biophys. Res. Commun. 172:945-951(1990).
RN
RP SEQUENCE FROM N.A.
RC STRAIN=129/Sv; TISSUE=Liver;
RX MEDLINE=95137392; PubMed=7835704;
RA Huh C., Nagle J.W., Kozak C.A., Abrahamson M., Karlsson S.;
RT "Structural organization, expression and chromosomal mapping of the
RT mouse cystatin-C-encoding gene (Cst3).";
RL Gene 152:221-226(1995).
RN
RP SEQUENCE FROM N.A.
RC STRAIN=ILIS;
RX MEDLINE=21363810; PubMed=11471062;
RA Ehringer M.A., Thompson J., Conroy O., Xu Y., Yang F., Cammiff J.,
RA Beeson M., Gordon L., Bennett B., Johnson T.E., Sikela J.M.;
RT "High-throughput sequence identification of gene coding variants
RT within alcohol-related QTLs";
RL Mamm. Genome 12:657-663(2001).
RN
RP SEQUENCE FROM N.A.
RX MEDLINE=22388257; PubMed=12477932;
RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.B., Donald M.F., Casavant T.L., Scheetz T.E.,
RA Brownstein M.J., Ueda T.B., Toshiyuki S., Carninci P., Prange C.,
RA Raha S.S., Loggellano N.A., Peters G.J., Abramson R.D., Mullaly S.J.,
RA Bobak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulik S.W.,
RA Villalón D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Pahey J., Helton E., Keltman M., Madan A.C., Rodriguez S., Sanchez A.,
RA Whiting M., Madan A., Young A.C., Shervchenko Y., Bouffard G.G.,
RA Blakeley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Buttefield Y.S.N., Krzywinski M.I., Skalska U., Smallus D.E.,
RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT "Generation and initial analysis of more than 15,000 full-length
RT human and mouse cDNA sequences.";
RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
CC -1- FUNCTION: As an inhibitor of cysteine proteinases, this protein is
CC thought to serve an important physiological role as a local
CC regulator of this enzyme activity.
CC -1- SIMILARITY: Belongs to the cystatin family.
CC
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CC
DR EMBL; M59470; AAA63298.1; -
DR EMBL; U10098; AAB41056.1; -
DR EMBL; AF483486; AAL50760.1; -
DR EMBL; AF483487; AAL50761.1; -
DR EMBL; BC002072; AAH02072.1; -
DR PIR; A36163; A36163.
DR HSSP; P01034; 1G96.
DR MGD; MGI:102519; Cst3.
DR InterPro; IPR000010; Cystatin.
DR Pfam; PF00031; Cystatin; 1.
DR SMART; SM00043; Cy; 1.
DR PROSITE; PS00287; CYSTATIN; 1.
KM Thiol protease inhibitor; Signal.
FT SIGNAL 1 20
FT CHAIN 21 140 CYSTATIN C.
FT ACT_SITE 31 31 REACTIVE SITE.
FT SITE 75 79 SECONDARY AREA OF CONTACT.
FT DISULFID 93 103 BY SIMILARITY.
FT DISULFID 117 137 BY SIMILARITY.
FT CONFLICT 16 16 A -> G (IN REF. 1).
FT CONFLICT 84 84 L -> F (IN REF. 1).
SQ SEQUENCE 140 AA; 15531 MW; 3A563406D58D0F5 CRC64;

Query Match 32.0%; Score 142.5; DB 1; Length 140;
Best Local Similarity 37.8%; Pred. No. 1.5e-09;
Matches 28; Conservative 18; Mismatches 25; Indels 3; Gaps 2;

QY 1 QYNESDDKYPHIFRYLAKYQOVTDHLEHILNVMQWTCQRPET--TNC-VPQERELH 57
DB 53 EYKGSNDADHSHRAIQVRRARQGVGVNFFLDVEMORTTCSTGTLTDCPFPHDQHLM 112
QY 58 KQVNCFFSVPFAVPM 71
DB 113 RKAFCSFQIYTPW 126

RESULT 15
CSTL_HUMAN STANDARD; PRT; 165 AA.
ID CSTL_HUMAN
AC O9H114;
DT 28-FEB-2003 (Rel. 41, Created)
DT 28-FEB-2003 (Rel. 41, Last sequence update)
DT 28-FEB-2003 (Rel. 41, Last annotation update)
DE Cystatin-like 1 precursor.
GN CSTL1.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Hominiidae; Homo.
OX NCBI_TaxID=9606;
RN
RP SEQUENCE FROM N.A.
RX MEDLINE=21638749; PubMed=11780052;
RA Deloukas P., Matthews L.H., Ashurst J., Burton J., Gilbert J.G.R.,
RA Jones M., Scriver G., Almeida J.P., Babage A.K., Bagunley C.L.,
RA Bailey J., Barlow K.F., Bates K.N., Beard L.M., Beare D.M.,
RA Beasley O.P., Bird C.P., Blakey S.E., Bridgeman A.M., Brown A.J.,
RA Buck D., Burrill W.D., Butler A.P., Carder C., Carter N.P.,
RA Chapman J.C., Clamp M., Clark G., Clark L.N., Clark S.Y., Clee C.M.,
RA Clegg S., Cobley V.E., Collier R.E., Connor R.E., Corby N.R.,
RA Collison A., Coville G.J., Deadman R., Dhani P.D., Dunn M.,
RA Ellington A.G., Frankland J.A., Fraser A., French L., Garner P.,
RA Grafham D.V., Griffiths C., Griffiths M.N.D., Gwilliam R., Hall R.E.,
RA Hammond S., Harley J.L., Heath P.D., Ho S., Holden J.L., Howden P.J.,
RA Huckle E., Hunt A.R., Hunt S.E., Jekosch K., Johnson C.M., Johnson D.,
RA Kay M.P., Kimberley A.M., King A., Knights A., Laird G.K., Lawlor S.,
RA Levenshain W.H., Leversha M.A., Lloyd C., Lloyd D.M., Lovell J.D.,
RA Marsh V.L., Martin S.L., McConachie L.J., McKay K., McNurray A.A.,
RA Milne S.A., Mistry D., Moore M.J.F., Mullikin J.C., Nickerson T.,

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OM protein - protein search, using sw model

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(without alignments)
589.132 Million cell updates/sec

Title: US-09-941-314-15

Perfect score: 446

Sequence: 1 QYNKESDDKXHFRIFFRLKLVK.....NCFPSVFAVPWFPOYKILNK 80

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 1017041 seqs, 315518202 residues

Total number of hits satisfying chosen parameters: 1017041

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :
1: SP archaea:*
2: SP_bacteria:*
3: SP_fungi:*
4: SP_human:*
5: SP_invertebrate:*
6: SP_mammal:*
7: SP_mhc:*
8: SP_organelle:*
9: SP_phage:*
10: SP_plant:*
11: SP_rodent:*
12: SP_virus:*
13: SP_vertebrate:*
14: SP_unclassified:*
15: SP_virus:*
16: SP_bacterioplasmid:*
17: SP_archaeal:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	446	100.0	138	4	Q8WUX6
2	269	60.3	139	11	Q8K5A3
3	217.5	48.8	103	4	Q8WUX5
4	169.5	38.0	141	11	Q9DAP1
5	169.5	38.0	141	11	Q80ZNS
6	145.5	32.6	140	11	Q9EPX9
7	133	29.8	140	11	Q80Y72
8	115	25.8	112	13	Q98SR4
9	115	25.8	112	13	Q98SR3
10	106	23.8	167	4	Q7Z4T8
11	105.5	23.7	146	11	Q9JMB4
12	104.5	23.4	146	11	Q8K397
13	104.5	23.4	149	11	Q8VHC1
14	104.5	23.4	149	11	Q9DIB1
15	100.5	22.5	130	11	Q8VIB8
16	99.5	22.3	128	11	Q9DAN8

17	99.5	22.3	130	11	Q9CX46	Q9CX46 mus musculus
18	99.5	22.3	130	11	Q8VIB3	Q8VIB3 mus musculus
19	96	21.5	167	11	Q9QWLS	Q9QWLS mus musculus
20	95.5	21.4	109	5	Q9TY65	Q9TY65 onchocerca
21	89.5	20.1	148	11	Q8VIB2	Q8VIB2 rat mus norv
22	88.5	19.8	144	13	Q8JUF5	Q8JUF5 brachydantio
23	88.5	19.8	161	5	Q16159	Q16159 brugia mala
24	84.5	18.9	125	5	Q25620	Q25620 onchocerca
25	81.5	18.3	148	5	Q9NH95	Q9NH95 lltomosoid
26	79	17.7	127	5	P90598	P90598 brugia mala
27	78	17.5	425	3	Q12700	Q12700 debaryomyce
28	76.5	17.2	127	5	Q9U9A1	Q9U9A1 onchocerca
29	76.5	17.2	157	5	Q17108	Q17108 acanthocheil
30	76	17.0	430	11	Q63581	Q63581 rat mus norv
31	75	16.8	140	6	Q7YRP6	Q7YRP6 sus scrofa
32	75	16.8	498	5	Q16454	Q16454 caenorhabdi
33	74	16.6	133	5	Q8WVB6	Q8WVB6 ixodes scap
34	72.5	16.3	462	13	Q7ZY91	Q7ZY91 xenopus lae
35	72.5	16.3	465	13	Q801E5	Q801E5 xenopus lae
36	72	16.1	423	11	P70517	P70517 rat mus norv
37	72	16.1	996	4	Q8NDM7	Q8NDM7 homo sapien
38	71	15.9	506	5	Q4421	Q4421 dirosophila
39	69.5	15.6	462	13	Q7SYH2	Q7SYH2 xenopus lae
40	69	15.5	133	11	Q9D264	Q9D264 mus musculus
41	69	15.5	1779	5	Q18150	Q18150 caenorhabdi
42	68.5	15.4	357	10	Q8GVD9	Q8GVD9 helianthus
43	67	15.0	122	5	Q44396	Q44396 haemonchus
44	67	15.0	159	4	Q8TD53	Q8TD53 homo sapien
45	67	15.0	284	16	Q88207	Q88207 lactobacilli

ALIGNMENTS

RESULT 1
ID Q8WUX6 PRELIMINARY; PRT; 138 AA.

AC Q8WUX6;
DT 01-MAR-2002 (TREMURel. 20, Created)
DT 01-MAR-2002 (TREMURel. 20, Last sequence update)
DT 01-JUN-2003 (TREMURel. 24, Last annotation update)
DE SC13.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Homiidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A.
RA Hamil K.G., Liu Q., Zhang Y.-L., French P.S., Hall S.H.;
RT "SC13: A novel epididymal specific member of the cystatin family."
RL Submitted (JAN-2001) to the EMBL/GenBank/DBJ databases.
DR EMBL; AF35480; AL7191.1; -
DR GO; GO:0004869; F:cysteine protease inhibitor activity; IEA.
DR InterPro; IPR000010; Cystatin.
DR Pfam; PF00031; Cystatin; 1.
DR SMART; SM00043; CT; 1.
SQ SEQUENCE 138 AA; 16506 MW; E49440ACA3585C64 CRC64;

Query Match 100.0%; Score 446; DB 4; Length 138;
Best Local Similarity 100.0%; Pred. No. 1.1e-46;
Matches 80; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 QYNKESDDKXHFRIFFRLKLVKQROVTDHLEVLNVEMQWTTCKQRETTNCCVPOERELKOV 60
Db 54 QYNKESDDKXHFRIFFRLKLVKQROVTDHLEVLNVEMQWTTCKQRETTNCCVPOERELKOV 113

QY 61 NCFPSVFAVPWFPOYKILNK 80
Db 114 NCFPSVFAVPWFPOYKILNK 133

RESULT 2
Q8K5A3

ID Q8K5A3 PRELIMINARY; PRT; 139 AA.
 AC Q8K5A3; (TREMBlrel. 22, Created)
 DT 01-OCT-2002 (TREMBlrel. 22, Last sequence update)
 DT 01-OCT-2002 (TREMBlrel. 22, Last sequence update)
 DT 01-JUN-2003 (TREMBlrel. 24, Last annotation update)
 DE Cystatin 11.
 GN Cst11.
 OS Rattus norvegicus (Rat).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
 NCBI_TaxID=10116;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN=Sprague-Dawley;
 RA Hamil K.G., Hall S.H.;
 RL Submitted (APR-2002) to the EMBL/GenBank/DBJ databases.
 DR EMBL; AF501230; AM21709.1;
 DR GO; GO:0004869; F:cysteine protease inhibitor activity; IEA.
 DR InterPro; IPR000010; Cystatin.
 DR Pfam; PF00031; Cystatin; 1.
 DR SMART; SM00043; Cy; 1.
 SQ SEQUENCE 139 AA; 16686 MW; E1E36DB786B4D08C CRC64;

Query Match 60.3%; Score 269; DB 11; Length 139;
 Best Local Similarity 55.0%; Pred. No. 4.9e-25;
 Matches 44; Conservative 19; Mismatches 17; Indels 0; Gaps 0;

QY 1 QYNKESDDKXHFRIFRVLKQVROVTDHLEHLNVEMQMTTCQKRETNCPQERELHKOV 60
 DB 54 EYKKSDDLNFRLIKLEKQNTMHEPHITVEMQRTTCLKERKLCNVQEGELHKQI 113
 QY 61 NCFPSVFAVPWFQYKILNK 80
 DB 114 QCFPSVFAVPWFQYKILNK 133

RESULT 3
 Q8MXU5 PRELIMINARY; PRT; 103 AA.
 ID Q8MXU5
 AC Q8MXU5; (TREMBlrel. 20, Created)
 DT 01-MAR-2002 (TREMBlrel. 20, Last sequence update)
 DT 01-JUN-2003 (TREMBlrel. 24, Last annotation update)
 DE SC13delta.
 OS Homo sapiens (Human).
 OC Eukaryota; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Primates; Catarrhini; Hominiidae; Homo.
 NCBI_TaxID=9606;
 RN [1]
 RP SEQUENCE FROM N.A.
 RA Hamil K.G., Liu Q., Zhang Y.-L., French F.S., Hall S.H.;
 RL "SC13: A novel epididymal specific member of the cystatin family."
 RT Submitted (JUN-2001) to the EMBL/GenBank/DBJ databases.
 DR EMBL; AF335481; AAL71992.1;
 DR GO; GO:0004869; F:cysteine protease inhibitor activity; IEA.
 DR InterPro; IPR000010; Cystatin.
 DR Pfam; PF00031; Cystatin; 1.
 SQ SEQUENCE 103 AA; 12285 MW; 05DD92C47387B022 CRC64;

Query Match 48.8%; Score 217.5; DB 4; Length 103;
 Best Local Similarity 56.2%; Pred. No. 7.1e-19;
 Matches 45; Conservative 0; Mismatches 0; Indels 35; Gaps 1;

QY 1 QYNKESDDKXHFRIFRVLKQVROVTDHLEHLNVEMQMTTCQKRETNCPQERELHKOV 60
 DB 54 QYNKESDDKXHFRIFRVLKQVROVTDHLEHLNVEMQMTTCQKRETNCPQERELHKOV 78
 QY 61 NCFPSVFAVPWFQYKILNK 80
 DB 79 NCFPSVFAVPWFQYKILNK 98

RESULT 4

Q9DAP1 PRELIMINARY; PRT; 141 AA.
 ID Q9DAP1
 AC Q9DAP1; (TREMBlrel. 17, Created)
 DT 01-JUN-2001 (TREMBlrel. 17, Last sequence update)
 DT 01-JUN-2001 (TREMBlrel. 17, Last sequence update)
 DT 01-JUN-2003 (TREMBlrel. 24, Last annotation update)
 DE 1700006C19Rik protein.
 GN 1700006C19Rik.
 OS Mus musculus (Mouse).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
 NCBI_TaxID=10090;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN=C57BL/6J; TISSUE=Testis;
 RX MEDLINE=21085660; PubMed=11217851;
 RA Kawai T., Shingawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
 RA Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamataka I.,
 RA Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,
 RA Kadoya K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
 RA Fleischmann W., Gaasterland T., Gissi C., King B., Kochiwa H.,
 RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
 RA Schmitt L.W., Staudli F., Suzuki R., Tomita M., Wagner L., Washio T.,
 RA Sakai K., Okido T., Futuno M., Aono H., Baldarelli R., Barsh G.,
 RA Blake J., Bonfelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
 RA Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
 RA Guncich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
 RA Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,
 RA Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
 RA Sasaki H., Sato K., Schoenbach C., Seta T., Shibata Y., Storch K.-F.,
 RA Suzuki H., Toyooka K., Wang K.H., Weltz C., Whitaker C., Wilming L.,
 RA Wyshah-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohetsuki S.,
 RA Hayashizaki Y.;
 RT "Functional annotation of a full-length mouse cDNA collection."
 RL Nature 409:685-690(2001).
 DR EMBL; AK005665; BAB24175.1; -.
 DR HSP; P01038; ICEW.
 DR MGD; MGI:1916544; 1700006C19Rik.
 DR GO; GO:0004869; F:cysteine protease inhibitor activity; IEA.
 DR InterPro; IPR000010; Cystatin.
 DR Pfam; PF00031; Cystatin; 1.
 DR SMART; SM00043; Cy; 1.
 SQ SEQUENCE 141 AA; 16811 MW; C20FA0D8B1AC378C CRC64;

Query Match 38.0%; Score 169.5; DB 11; Length 141;
 Best Local Similarity 42.2%; Pred. No. 7.4e-13;
 Matches 35; Conservative 17; Mismatches 28; Indels 3; Gaps 2;

QY 1 QYNKESDDKXHFRIFRVLKQVROVTDHLEHLNVEMQMTTCQKRETNCPQERELHKOV 57
 DB 54 EYKKSDDLNFRLIKLEKQNTMHEPHITVEMQRTTCLKERKLCNVQEGELHKQI 113
 QY 58 KYNCFPSVFAVPWFQYKILNK 80
 DB 114 KYNCFPSVFAVPWFQYKILNK 136

RESULT 5
 Q80ZNS PRELIMINARY; PRT; 141 AA.
 ID Q80ZNS
 AC Q80ZNS; (TREMBlrel. 24, Created)
 DT 01-JUN-2003 (TREMBlrel. 24, Last sequence update)
 DT 01-JUN-2003 (TREMBlrel. 24, Last sequence update)
 DT 01-OCT-2003 (TREMBlrel. 25, Last annotation update)
 DE RIKEN cDNA 1700006C19 gene.
 OS Mus musculus (Mouse).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
 NCBI_TaxID=10090;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Testicle;


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RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=Liver;
RA Bai J., Lao H., Ye X., Li Y., Lou J.;
RT "Molecular cloning and sequence analysis of cystatin cDNA from two
RT species of sturgeons."
RL Submitted (JAN-2001) to the EMBL/GenBank/DBJ databases.
DR EMBL; AF34610; AAK16731.1; -.
DR HSSP; P01038; 1A90.
DR GO; GO:0004869; F:cysteine protease inhibitor activity; IEA.
DR InterPro; IPR000010; Cystatin.
DR SMART; SM00043; CY; 1.
DR PROSITE; PS00287; CYSTATIN; 1.
FT NCN TER
SQ SEQUENCE 112 AA; 12231 MW; 48CEBFD8A08C00 CRC64;

Query Match 25.8%; Score 115; DB 13; Length 112;
Best Local Similarity 34.1%; Pred. No. 2.7e-06;
Matches 29; Conservative 18; Mismatches 28; Indels 10; Gaps 3;

QY 1 QYNKESDDKXHFRIFRVLKQROVTDHLEHNLNEMQWTTQCK--PETTNC---VPOE 53
DB 26 EFNASNDMTIHRSKVKKQKVAGIKYIVTQMGRTSCRGAEKIELCAFDVP-- 83
QY 54 RELHKQVNCFFSVFVAPWFEQYKIL 78
DB 84 -ELAKTSTCTPEVVSRLMIPETKIV 107

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RESULT 9
Q96SR3 PRELIMINARY; PRT; 112 AA.

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ID Q96SR3
AC Q96SR3;
DT 01-JUN-2001 (TREMBlrel. 17, Created)
DT 01-JUN-2001 (TREMBlrel. 17, Last sequence update)
DT 01-JUN-2003 (TREMBlrel. 24, Last annotation update)
DE Cystatin (Fragment).
OS Acipenser schrenckii (Amur sturgeon).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Actinopterygii; Chondrostei; Acipenseriformes; Acipenseridae;
OC Acipenser.
OX NCBI_TaxID=111304;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=Liver;
RA Bai J., Lao H., Ye X., Li Y., Lou J.;
RT "Molecular cloning and sequence analysis of cystatin cDNA from two
RT species of sturgeons."
RL Submitted (JAN-2001) to the EMBL/GenBank/DBJ databases.
DR EMBL; AF34611; AAK16732.1; -.
DR HSSP; P01038; 1A90.
DR GO; GO:0004869; F:cysteine protease inhibitor activity; IEA.
DR InterPro; IPR000010; Cystatin.
DR Pfam; PF00031; Cystatin; 1.
DR PROSITE; PS00287; CYSTATIN; 1.
FT NCN TER
SQ SEQUENCE 112 AA; 12231 MW; 48CEBFD8A08C00 CRC64;

```

```

Query Match 25.8%; Score 115; DB 13; Length 112;
Best Local Similarity 34.1%; Pred. No. 2.7e-06;
Matches 29; Conservative 18; Mismatches 28; Indels 10; Gaps 3;

QY 1 QYNKESDDKXHFRIFRVLKQROVTDHLEHNLNEMQWTTQCK--PETTNC---VPOE 53
DB 26 EFNASNDMTIHRSKVKKQKVAGIKYIVTQMGRTSCRGAEKIELCAFDVP-- 83
QY 54 RELHKQVNCFFSVFVAPWFEQYKIL 78
DB 84 -ELAKTSTCTPEVVSRLMIPETKIV 107

```

RESULT 10

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Q724J8
ID Q724J8 PRELIMINARY; PRT; 167 AA.
AC Q724J8;
DT 01-OCT-2003 (TREMBlrel. 25, Created)
DT 01-OCT-2003 (TREMBlrel. 25, Last sequence update)
DT 01-OCT-2003 (TREMBlrel. 25, Last annotation update)
DE Cystatin F (leukocystatin).
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A.
RA Kaine N., Chen X., Rolfe A., Halleck A., Hines L., Eisenstein S.,
RA Koundinya M., Raphael J., Moreira D., Kelley T., Labaer J., Lin Y.,
RA Phelan M., Farmer A.;
RL Submitted (AUG-2003) to the EMBL/GenBank/DBJ databases.
DR EMBL; BT009825; AAB8827.1; -.
SQ SEQUENCE 167 AA; 18857 MW; E339025A5BD60177 CRC64;

Query Match 23.8%; Score 106; DB 4; Length 167;
Best Local Similarity 28.4%; Pred. No. 5.2e-05;
Matches 23; Conservative 22; Mismatches 32; Indels 4; Gaps 2;

QY 1 QYNKESDDKXHFRIFRVLKQROVTDHLEHNLNEMQWTTQCKPE--TTNCPQERELH 57
DB 81 KFNCTNDMFLFKESRITRALVQIVKGLKYMLEIVEIGRTTCKKNQHLDDCDFOGHTNL 140
QY 58 KQ-VNCFPSVFAVPWFEQYKI 77
DB 141 KQTLSCYSEVWVFWLQHFVEV 161

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RESULT 11

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ID Q9JMB4 PRELIMINARY; PRT; 148 AA.
AC Q9JMB4;
DT 01-OCT-2000 (TREMBlrel. 15, Created)
DT 01-OCT-2000 (TREMBlrel. 15, Last sequence update)
DT 01-JUN-2003 (TREMBlrel. 24, Last annotation update)
DE DD72 protein (similar to cystatin 10) (Chondrocytes).
GN CST10 OR DD72.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RA Ikegawa S., Nakamura Y.;
RT "DD72, a novel mouse gene implicated in the early stage of ectopic
RT ossification."
RL Submitted (JAN-2000) to the EMBL/GenBank/DBJ databases.
RN [2]
RP SEQUENCE FROM N.A.
RC STRAIN=FVB/N; TISSUE=salivary gland;
RA Strauberg R.;
RL Submitted (MAR-2003) to the EMBL/GenBank/DBJ databases.
DR EMBL; AB036743; BA95411.1; -.
DR EMBL; BC048364; AAH48364.1; -.
DR HSSP; P01034; 1G96.
DR MGD; MGI:1930004; Gcrl0.
DR GO; GO:0004869; F:cysteine protease inhibitor activity; IEA.
DR InterPro; IPR000010; Cystatin.
DR InterPro; IPR001713; Steffina.
DR Pfam; PF00031; Cystatin; 1.
DR PRINTS; PR00295; STEFINA.
DR SMART; SM00043; CY; 1.
DR PROSITE; PS00287; CYSTATIN; 1.
SQ SEQUENCE 148 AA; 16451 MW; 637534CBFSAAL179 CRC64;

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Query Match 23.7%; Score 105.5; DB 11; Length 148;
Best Local Similarity 29.6%; Pred. No. 5.3e-05;
Matches 24; Conservative 16; Mismatches 38; Indels 3; Gaps 2;

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DR InterPro; IPR000010; Cystatin.
 DR Pfam; PF00031; Cystatin; 1.
 SQ SEQUENCE 149 AA; 16796 MW; E713EB920E0FFCC5 CRC64;

Query Match 23.4%; Score 104.5; DB 11; Length 149;
 Best Local Similarity 26.2%; Pred. No. 7.1e-05;
 Matches 22; Conservative 20; Mismatches 35; Indels 7; Gaps 1;

QY 2 YNKESDDKYHRIFRVLKVRQVTDHLEHNLNEMQWTCOKP-----ETNCPQER 54
 DB 59 YNKGSDSLYFRDTKVIDAKYQLVAGIKYITLDIESTECKRIVSGEHDLTTCPLAAG 118

QY 55 ELHKQVNCFFSVFAPVWPEQYKIL 78
 DB 119 GQOEKLRCNFELLEVPWKNTTQLL 142

RESULT 15

Q8VIH8 PRELIMINARY; PRT; 130 AA.
 AC Q8VIH8;
 DT 01-MAR-2002 (TrEMBLrel. 20, Created)
 DT 01-MAR-2002 (TrEMBLrel. 20, Last sequence update)
 DT 01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
 DE Cystatin SC.
 OS Rattus norvegicus (Rat).
 OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
 OX NCBI_TaxID=10116;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN=Sprague-Dawley; TISSUE=Testis;
 RA Li Y., Friel P.J., Griewold M.D.;
 RT "Molecular cloning and characterization of cystatin SC and cystatin
 RT TE-1, new members of the cystatin family.";
 RL Submitted (OCT-2001) to the EMBL/Genbank/DBJ databases.
 DR EMBL; AF442205; AL35350.1; -
 DR GO; GO:004869; F:Cysteine protease inhibitor activity; IEA.
 DR InterPro; IPR000010; Cystatin.
 DR Pfam; PF00031; Cystatin; 1.
 DR SMART; SM00043; CY; 1.
 SQ SEQUENCE 130 AA; 14981 MW; 7A752359860989C9 CRC64;

Query Match 22.5%; Score 100.5; DB 11; Length 130;
 Best Local Similarity 28.8%; Pred. No. 0.00019;
 Matches 23; Conservative 21; Mismatches 33; Indels 3; Gaps 2;

QY 1 QYNKESDDKTHFRIFRLVKVRQVTDHLEHNLNEMQWTCOKPETT--NCVPERELMK 58
 DB 45 QFNNDNNEENTYRLLEVGRAQKK-TWTWIFLMDLEMGRTICKKHDENIHNCPLQSGSEK 103

QY 59 QVNCFFSVFAPVWPEQYKIL 78
 DB 104 KVHCVFQVDARPMPSHFTVL 123

Search completed: March 23, 2004, 17:13:31
 Job time : 43.8452 secs

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: March 23, 2004, 17:04:13 ; Search time 47.1506 Seconds

(without alignments)
353.554 Million cell updates/sec

Title: US-09-941-314-16

Perfect score: 334

Sequence: 1 RQVTDHLEHYLVNEMQWTC.....NCFPSVPAVPMFEQYKILNK 59

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 1586107 seqs, 282547505 residues

Total number of hits satisfying chosen parameters: 1586107

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Database : A_Geneseq_29Jan04:*

1: geneseqp1980s:*
2: geneseqp1990s:*
3: geneseqp2000s:*
4: geneseqp2001s:*
5: geneseqp2002s:*
6: geneseqp2003as:*
7: geneseqp2003bs:*
8: geneseqp2004s:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	334	100.0	59	AAU79866	AAU79866 Human cys
2	334	100.0	80	AAU79865	AAU79865 Human cys
3	334	100.0	115	AAU79853	AAU79853 Human cys
4	334	100.0	117	AAU79854	AAU79854 Human cys
5	334	100.0	137	AAU79852	AAU79852 Human cys
6	273	81.7	48	AAU79867	AAU79867 Human cys
7	194	58.1	52	AAU79864	AAU79864 Human cys
8	189	56.6	33	AAU79862	AAU79862 Human cys
9	154	46.1	46	AAU79860	AAU79860 Human cys
10	154	46.1	49	AAU79863	AAU79863 Human cys
11	143.5	43.0	142	ADDA6708	ADDA6708 Rat Prote
12	143.5	43.0	142	ADDA6704	ADDA6704 Rat Prote
13	142.5	42.7	142	AAE04404	AAE04404 Murine cy
14	142.5	42.7	142	AAE04433	AAE04433 Mouse cys
15	142.5	42.7	143	ADDA14374	ADDA14374 Mouse spe
16	138	41.3	24	AAU79861	AAU79861 Human cys
17	112.5	33.7	92	AAW78259	AAW78259 Fragment
18	112.5	33.7	123	AAW78260	AAW78260 Fragment
19	112.5	33.7	142	AAW78258	AAW78258 Fragment
20	112.5	33.7	142	AAE02405	AAE02405 Human cys
21	112.5	33.7	142	AAE04434	AAE04434 Human cys
22	112.5	33.7	142	ADA57231	ADA57231 Human bec
23	112.5	33.7	142	ADA41112	ADA41112 Human bec
24	112.5	33.7	142	ADC74335	ADC74335 Human sec
25	112.5	33.7	142	ADD37980	ADD37980 Human sec

26	112.5	33.7	142	7	ADDA6706	ADDA6706 Human Pro
27	112.5	33.7	142	7	ADDA6710	ADDA6710 Human Pro
28	111	33.2	145	4	AAE04315	AAE04315 Alternati
29	111	33.2	145	5	AAU76555	AAU76555 Human Zcy
30	111	33.2	145	6	ABG75917	ABG75917 Human cys
31	111	33.2	165	4	AAE04324	AAE04324 Human Zcy
32	111	33.2	165	5	AAU76556	AAU76556 Human Zcy
33	111	33.2	165	6	ABG75918	ABG75918 Human cys
34	107.5	32.2	141	3	AAU96576	AAU96576 Murine cy
35	107.5	32.2	141	4	AAE02403	AAE02403 Murine cy
36	107.5	32.2	141	4	AAE04432	AAE04432 Mouse tes
37	106	31.7	145	4	AAE04323	AAE04323 Human Zcy
38	106	31.7	145	4	AAE04887	AAE04887 Human pro
39	106	31.7	145	5	AAU76578	AAU76578 Human Zcy
40	106	31.7	145	6	ABG75925	ABG75925 Human cys
41	105	31.4	145	4	AAU08667	AAU08667 Human NOV
42	101.5	30.4	116	3	AAU81210	AAU81210 Egg white
43	100.5	30.1	116	3	AAU81212	AAU81212 Egg white
44	99.5	29.8	116	3	AAU81203	AAU81203 Egg white
45	99.5	29.8	116	3	AAU81207	AAU81207 Egg white

ALIGNMENTS

RESULT 1
AAU79866 standard; peptide; 59 AA.
ID AAU79866;
AC AAU79866;
AD 15-JUL-2002 (first entry)
DE Human cystatin-8 (Zcys8) antigenic fragment #14.
EE Cystatin-8; Zcys8; cancer; procoagulant protein; thrombosis;
FF spermatogenesis; seminal fluid viscosity; cryopreserved sperm;
GG sperm motility; fertilisation; antigenic peptide.
HH Homo sapiens.
II WO200220567-A2.
JJ 14-MAR-2002.
KK 29-AUG-2001; 2001WO-US026668.
LL 01-SEP-2000; 2000US-0230230P.
MM (ZYMO) ZYMOGENETICS INC.
NN Holloway JL, Gao Z, Bishop PD;
OO WPI; 2002-383044/41.
PP Novel isolated mammalian cystatin-8 polypeptide useful for promoting
PT spermatogenesis, and inhibiting cancer procoagulant protein which leads
PU to inhibition of thrombotic events associated with cancer.
PV Claim 2; Page 99; 100pp; English.
PW The invention describes an isolated mammalian cystatin-8 (Zcys8)
WX polypeptide (I). (I) is useful for: inhibiting cancer procoagulant
XX protein in an individual and thus inhibiting the thrombotic events
YY associated with cancer; promoting spermatogenesis, modulating seminal
ZZ fluid viscosity; enhancing viability of cryopreserved sperm; sperm
mobility and fertilisation; and as antigenic peptides to generate
antibodies. Zcys8 is useful as research reagent for characterising sites
of interaction between Zcys8 and its receptor. Zcys8 is useful in
enhancing fertilisation during assisted reproduction in humans and in
animals. Anti-(I) antibodies are useful to screen biological samples like
blood, urine, saliva, tissue biopsy and autopsy material in vitro for the
presence of Zcys8. The antibodies are also useful to isolate large

CC quantities of Zcys8 protein and DNA sequences that encode Zcys8 genes.
 CC The polynucleotide encoding (1) is useful to detect and to localise the
 CC expression of a Zcys8 gene in a biological sample and Zcys8
 CC oligonucleotide probes are useful for in vivo diagnosis. The
 CC polynucleotide encoding (1) is useful in determining whether a subject's
 CC chromosomes contain a mutation in the Zcys8 gene like aneuploidy, gene
 CC copy number changes, insertions, deletions, restriction site changes and
 CC rearrangements and genetic alterations that inactivate the Zcys8 gene.
 CC This sequence represents an antigenic peptide of human cystatin-8 (Zcys8)
 XX
 SQ Sequence 59 AA;
 Query Match 100.0%; Score 334; DB 5; Length 59;
 Best Local Similarity 100.0%; Pred. No. 3.1e-34;
 Matches 59; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 1 RQVTDHLEHNLNEMQMTTCQKPEITNCVQERELHKNVCFPSVFAVPMFEQYKILNK 59
 1 RQVTDHLEHNLNEMQMTTCQKPEITNCVQERELHKNVCFPSVFAVPMFEQYKILNK 59
 DB
 RESULT 2
 AAV79865
 ID AAV79865 standard; peptide; 80 AA.
 AC AAV79865;
 XX
 XX 15-JUL-2002 (first entry)
 DT
 DE Human cystatin-8 (Zcys8) antigenic fragment #13.
 XX
 XX Cystatin-8; Zcys8; cancer; procoagulant protein; thrombosis;
 KM spermatogenesis; seminal fluid viscosity; cryopreserved sperm;
 KW sperm motility; fertilisation; antigenic peptide.
 OS
 OS Homo sapiens.
 XX
 XX WO200220567-A2.
 XX
 XX 14-MAR-2002.
 PD
 XX 29-AUG-2001; 2001WO-US026868.
 PF
 XX 01-SEP-2000; 2000US-0230230P.
 PR
 XX (ZYMO) ZYMOGENETICS INC.
 PA
 PI Holloway JL, Gao Z, Bishop PD;
 XX
 DR WPI; 2002-383044/41.
 XX
 PT Novel isolated mammalian cystatin-8 polypeptide useful for promoting
 PT spermatogenesis, and inhibiting cancer procoagulant protein which leads
 PT to inhibition of thrombotic events associated with cancer.
 PS
 PS Claim 2; Page 98; 100pp; English.
 XX
 XX The invention describes an isolated mammalian cystatin-8 (Zcys8)
 CC polypeptide (1). (1) is useful for: inhibiting cancer procoagulant
 CC protein in an individual and thus inhibiting the thrombotic events
 CC associated with cancer; promoting spermatogenesis; modulating seminal
 CC fluid viscosity; enhancing viability of cryopreserved sperm; sperm
 CC motility and fertilisation; and as antigenic peptides to generate
 CC antibodies. Zcys8 is useful as research reagent for characterising sites
 CC of interaction between Zcys8 and its receptor. Zcys8 is useful in
 CC enhancing fertilisation during assisted reproduction in humans and in
 CC animals. Anti-(1) antibodies are useful to screen biological samples like
 CC blood, urine, saliva, tissue biopsy and autopsy material in vitro for the
 CC presence of Zcys8. The antibodies are also useful to isolate large
 CC quantities of Zcys8 protein and DNA sequences that encode Zcys8 genes.
 CC The polynucleotide encoding (1) is useful to detect and to localise the
 CC expression of a Zcys8 gene in a biological sample and Zcys8
 CC oligonucleotide probes are useful for in vivo diagnosis. The

CC polynucleotide encoding (1) is useful in determining whether a subject's
 CC chromosomes contain a mutation in the Zcys8 gene like aneuploidy, gene
 CC copy number changes, insertions, deletions, restriction site changes and
 CC rearrangements and genetic alterations that inactivate the Zcys8 gene.
 CC This sequence represents an antigenic peptide of human cystatin-8 (Zcys8)
 XX
 SQ Sequence 80 AA;
 Query Match 100.0%; Score 334; DB 5; Length 80;
 Best Local Similarity 100.0%; Pred. No. 4.5e-34;
 Matches 59; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 1 RQVTDHLEHNLNEMQMTTCQKPEITNCVQERELHKNVCFPSVFAVPMFEQYKILNK 59
 22 RQVTDHLEHNLNEMQMTTCQKPEITNCVQERELHKNVCFPSVFAVPMFEQYKILNK 80
 DB
 RESULT 3
 AAV79853
 ID AAV79853 standard; protein; 115 AA.
 AC AAV79853;
 XX
 XX 15-JUL-2002 (first entry)
 DT
 DE Human cystatin-8 (Zcys8) antigenic fragment #1.
 XX
 XX Cystatin-8; Zcys8; cancer; procoagulant protein; thrombosis;
 KM spermatogenesis; seminal fluid viscosity; cryopreserved sperm;
 KW sperm motility; fertilisation; antigenic fragment.
 OS
 OS Homo sapiens.
 XX
 XX WO200220567-A2.
 XX
 XX 14-MAR-2002.
 PD
 XX 29-AUG-2001; 2001WO-US026868.
 PF
 XX 01-SEP-2000; 2000US-0230230P.
 PR
 XX (ZYMO) ZYMOGENETICS INC.
 PA
 PI Holloway JL, Gao Z, Bishop PD;
 XX
 DR WPI; 2002-383044/41.
 XX
 PT Novel isolated mammalian cystatin-8 polypeptide useful for promoting
 PT spermatogenesis, and inhibiting cancer procoagulant protein which leads
 PT to inhibition of thrombotic events associated with cancer.
 PS
 PS Claim 2; Page 94; 100pp; English.
 XX
 XX The invention describes an isolated mammalian cystatin-8 (Zcys8)
 CC polypeptide (1). (1) is useful for: inhibiting cancer procoagulant
 CC protein in an individual and thus inhibiting the thrombotic events
 CC associated with cancer; promoting spermatogenesis; modulating seminal
 CC fluid viscosity; enhancing viability of cryopreserved sperm; sperm
 CC motility and fertilisation; and as antigenic peptides to generate
 CC antibodies. Zcys8 is useful as research reagent for characterising sites
 CC of interaction between Zcys8 and its receptor. Zcys8 is useful in
 CC enhancing fertilisation during assisted reproduction in humans and in
 CC animals. Anti-(1) antibodies are useful to screen biological samples like
 CC blood, urine, saliva, tissue biopsy and autopsy material in vitro for the
 CC presence of Zcys8. The antibodies are also useful to isolate large
 CC quantities of Zcys8 protein and DNA sequences that encode Zcys8 genes.
 CC The polynucleotide encoding (1) is useful to detect and to localise the
 CC expression of a Zcys8 gene in a biological sample and Zcys8
 CC oligonucleotide probes are useful for in vivo diagnosis. The
 CC polynucleotide encoding (1) is useful in determining whether a subject's
 CC chromosomes contain a mutation in the Zcys8 gene like aneuploidy, gene
 CC copy number changes, insertions, deletions, restriction site changes and
 CC rearrangements and genetic alterations that inactivate the Zcys8 gene.

CC This sequence represents an antigenic fragment of human cystatin-8
 CC (Zcys8)
 XX
 SQ Sequence 115 AA;
 Query Match 100.0%; Score 334; DB 5; Length 115;
 Best Local Similarity 100.0%; Pred. No. 6.9e-34;
 Matches 59; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 RQVTDHLEHYLANVEMQTTCKPPTTNCVPOERELHKQVNCFFSVAVPWFPEQYKILNK 59
 DB 52 RQVTDHLEHYLANVEMQTTCKPPTTNCVPOERELHKQVNCFFSVAVPWFPEQYKILNK 110

RESULT 4
 AAU79854
 ID AAU79854 standard; protein; 117 AA.
 AC AAU79854;
 XX
 DT 15-JUL-2002 (first entry)
 XX
 DE Human cystatin-8 (Zcys8) antigenic fragment #2.
 XX
 KM Cystatin-8; Zcys8; cancer; procoagulant protein; thrombosis;
 KM spermatogenesis; seminal fluid viscosity; cryopreserved sperm;
 KM sperm motility; fertilisation; antigenic fragment.
 XX
 OS Homo sapiens.
 XX
 PN WO200220567-A2.
 XX
 PD 14-MAR-2002.
 XX
 PF 29-AUG-2001; 2001MO-US026868.
 XX
 PR 01-SEP-2000; 2000US-0230230P.
 XX
 PA (ZYMO) ZYMOGENETICS INC.
 XX
 PI Holloway JL, Gao Z, Bishop PD;
 XX
 DR WPI, 2002-383044/41.
 XX
 PT Novel isolated mammalian cystatin-8 polypeptide useful for promoting
 PT spermatogenesis, and inhibiting cancer procoagulant protein which leads
 PT to inhibition of thrombotic events associated with cancer.
 XX
 PS Claim 2; Page 94-95; 100pp; English.
 XX
 CC The invention describes an isolated mammalian cystatin-8 (Zcys8)
 CC polypeptide (I). (I) is useful for: inhibiting cancer procoagulant
 CC protein in an individual and thus inhibiting the thrombotic events
 CC associated with cancer; promoting spermatogenesis, modulating seminal
 CC fluid viscosity, enhancing viability of cryopreserved sperm, sperm
 CC motility and fertilisation; and as antigenic peptides to generate
 CC antibodies. Zcys8 is useful as research reagent for characterising sites
 CC of interaction between Zcys8 and its receptor. Zcys8 is useful in
 CC enhancing fertilisation during assisted reproduction in humans and in
 CC animals. Anti-(I) antibodies are useful to screen biological samples like
 CC blood, urine, saliva, tissue biopsy and autopsy material in vitro for the
 CC presence of Zcys8. The antibodies are also useful to isolate large
 CC quantities of Zcys8 protein and DNA sequences that encode Zcys8 genes.
 CC The polynucleotide encoding (I) is useful to detect and to localise the
 CC expression of a Zcys8 gene in a biological sample and Zcys8
 CC oligonucleotide probes are useful for in vivo diagnosis. The
 CC polynucleotide encoding (I) is useful in determining whether a subject's
 CC chromosomes contain a mutation in the Zcys8 gene like aneuploidy, gene
 CC copy number changes, insertions, deletions, restriction site changes and
 CC rearrangements and genetic alterations that inactivate the Zcys8 gene.
 CC This sequence represents an antigenic fragment of human cystatin-8
 CC (Zcys8)
 XX

SQ Sequence 117 AA;
 Query Match 100.0%; Score 334; DB 5; Length 117;
 Best Local Similarity 100.0%; Pred. No. 7e-34;
 Matches 59; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 RQVTDHLEHYLANVEMQTTCKPPTTNCVPOERELHKQVNCFFSVAVPWFPEQYKILNK 59
 DB 54 RQVTDHLEHYLANVEMQTTCKPPTTNCVPOERELHKQVNCFFSVAVPWFPEQYKILNK 112

RESULT 5
 AAU79852
 ID AAU79852 standard; protein; 137 AA.
 AC AAU79852;
 XX
 DT 15-JUL-2002 (first entry)
 XX
 DE Human cystatin-8 (Zcys8).
 XX
 KM Cystatin-8; Zcys8; cancer; procoagulant protein; thrombosis;
 KM spermatogenesis; seminal fluid viscosity; cryopreserved sperm;
 KM sperm motility; fertilisation.
 XX
 OS Homo sapiens.
 XX
 PN WO200220567-A2.
 XX
 PD 14-MAR-2002.
 XX
 PF 29-AUG-2001; 2001MO-US026868.
 XX
 PR 01-SEP-2000; 2000US-0230230P.
 XX
 PA (ZYMO) ZYMOGENETICS INC.
 XX
 PI Holloway JL, Gao Z, Bishop PD;
 XX
 DR WPI, 2002-383044/41.
 DR N-PSDB; ABK49522.
 XX
 PT Novel isolated mammalian cystatin-8 polypeptide useful for promoting
 PT spermatogenesis, and inhibiting cancer procoagulant protein which leads
 PT to inhibition of thrombotic events associated with cancer.
 XX
 PS Claim 2; Page 93-94; 100pp; English.
 XX
 CC The invention describes an isolated mammalian cystatin-8 (Zcys8)
 CC polypeptide (I). (I) is useful for: inhibiting cancer procoagulant
 CC protein in an individual and thus inhibiting the thrombotic events
 CC associated with cancer; promoting spermatogenesis, modulating seminal
 CC fluid viscosity, enhancing viability of cryopreserved sperm, sperm
 CC motility and fertilisation; and as antigenic peptides to generate
 CC antibodies. Zcys8 is useful as research reagent for characterising sites
 CC of interaction between Zcys8 and its receptor. Zcys8 is useful in
 CC enhancing fertilisation during assisted reproduction in humans and in
 CC animals. Anti-(I) antibodies are useful to screen biological samples like
 CC blood, urine, saliva, tissue biopsy and autopsy material in vitro for the
 CC presence of Zcys8. The antibodies are also useful to isolate large
 CC quantities of Zcys8 protein and DNA sequences that encode Zcys8 genes.
 CC The polynucleotide encoding (I) is useful to detect and to localise the
 CC expression of a Zcys8 gene in a biological sample and Zcys8
 CC oligonucleotide probes are useful for in vivo diagnosis. The
 CC polynucleotide encoding (I) is useful in determining whether a subject's
 CC chromosomes contain a mutation in the Zcys8 gene like aneuploidy, gene
 CC copy number changes, insertions, deletions, restriction site changes and
 CC rearrangements and genetic alterations that inactivate the Zcys8 gene.
 CC This is the amino acid sequence of human cystatin-8 (Zcys8)
 CC
 SQ Sequence 137 AA;
 Query Match 100.0%; Score 334; DB 5; Length 137;

Best Local Similarity 100.0%; Pred. No. 8.5e-34;
Matches 59; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ROYTDHLEHYLANVEMOWTTCKPPTNCVPOERELHKOVNCFPSVFAVPMPEQYKILNK 59
DB 74 ROYTDHLEHYLANVEMOWTTCKPPTNCVPOERELHKOVNCFPSVFAVPMPEQYKILNK 132

RESULT 6

AAU79867 standard; peptide; 48 AA.

AAU79867;

15-JUL-2002 (first entry)

Human cystatin-8 (Zcys8) antigenic fragment #15.

Cystatin-8; Zcys8; cancer; procoagulant protein; thrombosis;
spermatogenesis; seminal fluid viscosity; cryopreserved sperm;
sperm motility; fertilisation; antigenic peptide.

Homo sapiens.

WO200220567-A2.

14-MAR-2002.

29-AUG-2001; 2001MO-US026868.

01-SEP-2000; 2000US-0230230P.

(ZYMO) ZYMOGENETICS INC.

Holloway JL, Gao Z, Bishop PD;

WPI; 2002-383044/41.

Novel isolated mammalian cystatin-8 polypeptide useful for promoting
spermatogenesis, and inhibiting cancer procoagulant protein which leads
to inhibition of thrombotic events associated with cancer.

Claim 2; Page 99; 100pp; English.

The invention describes an isolated mammalian cystatin-8 (Zcys8)
polypeptide (I). (I) is useful for: inhibiting cancer procoagulant
protein in an individual and thus inhibiting the thrombotic events
associated with cancer; promoting spermatogenesis, modulating seminal
fluid viscosity, enhancing viability of cryopreserved sperm, sperm
motility and fertilisation; and as antigenic peptides to generate
antibodies. Zcys8 is useful as research reagent for characterising sites
of interaction between Zcys8 and its receptor. Zcys8 is useful in
enhancing fertilisation during assisted reproduction in humans and in
animals. Anti-(I) antibodies are useful to screen biological samples like
blood, urine, saliva, tissue biopsy and autopsy material in vitro for the
presence of Zcys8. The antibodies are also useful to isolate large
quantities of Zcys8 protein and DNA sequences that encode Zcys8 genes.
The polynucleotide encoding (I) is useful to detect and to localise the
expression of a Zcys8 gene in a biological sample and Zcys8
oligonucleotide probes are useful for in vivo diagnosis. The
polynucleotide encoding (I) is useful in determining whether a subject's
chromosomes contain a mutation in the Zcys8 gene like aneuploidy, gene
copy number changes, insertions, deletions, restriction site changes and
rearrangements and genetic alterations that inactivate the Zcys8 gene.
This sequence represents an antigenic peptide of human cystatin-8 (Zcys8)

Sequence 48 AA;

Query Match 81.7%; Score 273; DB 5; Length 48;
Best Local Similarity 100.0%; Pred. No. 1.1e-26;
Matches 48; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 12 NVEMOWTTCKPPTNCVPOERELHKOVNCFPSVFAVPMPEQYKILNK 59

DB 1 NVEMOWTTCKPPTNCVPOERELHKOVNCFPSVFAVPMPEQYKILNK 48

RESULT 7

AAU79864 standard; peptide; 52 AA.

AAU79864;

15-JUL-2002 (first entry)

Human cystatin-8 (Zcys8) antigenic fragment #12.

Cystatin-8; Zcys8; cancer; procoagulant protein; thrombosis;
spermatogenesis; seminal fluid viscosity; cryopreserved sperm;
sperm motility; fertilisation; antigenic peptide.

Homo sapiens.

WO200220567-A2.

14-MAR-2002.

29-AUG-2001; 2001MO-US026868.

01-SEP-2000; 2000US-0230230P.

(ZYMO) ZYMOGENETICS INC.

Holloway JL, Gao Z, Bishop PD;

WPI; 2002-383044/41.

Novel isolated mammalian cystatin-8 polypeptide useful for promoting
spermatogenesis, and inhibiting cancer procoagulant protein which leads
to inhibition of thrombotic events associated with cancer.

Claim 2; Page 98; 100pp; English.

The invention describes an isolated mammalian cystatin-8 (Zcys8)
polypeptide (I). (I) is useful for: inhibiting cancer procoagulant
protein in an individual and thus inhibiting the thrombotic events
associated with cancer; promoting spermatogenesis, modulating seminal
fluid viscosity, enhancing viability of cryopreserved sperm, sperm
motility and fertilisation; and as antigenic peptides to generate
antibodies. Zcys8 is useful as research reagent for characterising sites
of interaction between Zcys8 and its receptor. Zcys8 is useful in
enhancing fertilisation during assisted reproduction in humans and in
animals. Anti-(I) antibodies are useful to screen biological samples like
blood, urine, saliva, tissue biopsy and autopsy material in vitro for the
presence of Zcys8. The antibodies are also useful to isolate large
quantities of Zcys8 protein and DNA sequences that encode Zcys8 genes.
The polynucleotide encoding (I) is useful to detect and to localise the
expression of a Zcys8 gene in a biological sample and Zcys8
oligonucleotide probes are useful for in vivo diagnosis. The
polynucleotide encoding (I) is useful in determining whether a subject's
chromosomes contain a mutation in the Zcys8 gene like aneuploidy, gene
copy number changes, insertions, deletions, restriction site changes and
rearrangements and genetic alterations that inactivate the Zcys8 gene.
This sequence represents an antigenic peptide of human cystatin-8 (Zcys8)

Sequence 52 AA;

Query Match 58.1%; Score 194; DB 5; Length 52;
Best Local Similarity 100.0%; Pred. No. 9.6e-17;
Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ROYTDHLEHYLANVEMOWTTCKPPTNCVPOERE 34
DB 19 ROYTDHLEHYLANVEMOWTTCKPPTNCVPOERE 52

DE		Human cystatin-8 (Zcys8) antigenic fragment #11.
XX		
KW	Cystatin-8; Zcys8; cancer; procoagulant protein; thromboisis;	
KW	spermatogenesis; seminal fluid viscosity; cryopreserved sperm;	
KW	sperm motility; fertilisation; antigenic peptide.	
XX		
OS	Homo sapiens.	
XX		
PN	WO200220567-A2.	
PD	14-MAR-2002.	
XX		
PF	29-AUG-2001; 2001MO-US026866.	
XX		
PR	01-SEP-2000; 2000US-0230230P.	
XX		
PA	(ZYMO) ZYMOGENETICS INC.	
PI	Holloway JL, Gao Z, Bishop PD;	
XX		
DR	WPI; 2002-383044/41.	
XX		
PT	Novel isolated mammalian cystatin-8 polypeptide useful for promoting	
PT	spermatogenesis, and inhibiting cancer procoagulant protein which leads	
PT	to inhibition of thrombotic events associated with cancer.	
XX		
PS	Claim 2; Page 97-98; 100P; English.	
XX		
CC	The invention describes an isolated mammalian cystatin-8 (Zcys8)	
CC	polypeptide (I). (I) is useful for: inhibiting cancer procoagulant	
CC	protein in an individual and thus inhibiting the thrombotic events	
CC	associated with cancer; promoting spermatogenesis, modulating seminal	
CC	fluid viscosity, enhancing viability of cryopreserved sperm, sperm	
CC	motility and fertilisation; and as antigenic peptides to generate	
CC	antibodies. Zcys8 is useful as research reagent for characterising sites	
CC	of interaction between Zcys8 and its receptor. Zcys8 is useful in	
CC	enhancing fertilisation during assisted reproduction in humans and in	
CC	animals. Anti-(I) antibodies are useful to screen biological samples like	
CC	blood, urine, saliva, tissue biopsy and autopsy material in vitro for the	
CC	presence of Zcys8. The antibodies are also useful to isolate large	
CC	quantities of Zcys8 protein and DNA sequences that encode Zcys8 genes.	
CC	The polynucleotide encoding (I) is useful to detect and to localise the	
CC	expression of a Zcys8 gene in a biological sample and Zcys8	
CC	oligonucleotide probes are useful for in vivo diagnosis. The	
CC	polynucleotide encoding (I) is useful in determining whether a subject's	
CC	chromosomes contain a mutation in the Zcys8 gene like aneuploidy, gene	
CC	copy number changes, insertions, deletions, restriction site changes and	
CC	rearrangements and genetic alterations that inactivate the Zcys8 gene.	
CC	This sequence represents an antigenic peptide of human cystatin-8 (Zcys8)	
XX		
SQ	Sequence 49 AA;	
	Query Match	46.1%; Score 154; DB 5; Length 49;
	Best Local Similarity	100.0%; Pred. No. 9.3e-12;
	Matches 27; Conservative	0; Mismatches 0; Indels 0; Gaps 0.
Oy	1 RQVTDHLEVLNVEVMQWTTCCKPEFTTN 27 	
Dd	23 RQVTDHLEVLNVEVMQWTTCCKPEFTTN 49 	
RESULT 11		
ID	ADD46708	
AC	ADD46708 standard; protein; 142 AA.	
XX		
AC	ADD46708;	
XX		
DT	29-JAN-2004 (first entry)	
XX		
DE	Rat Protein AAC36317, SEQ ID NO 12393.	
XX		
KW	Rat; pain; neuronal tissue; gene therapy; spinal segmental nerve injury;	
KW	chronic constriction injury; CCI; spared nerve injury; SNI; Chung.	

XX Rattus norvegicus.
XX
XS WO2003016475-A2.
FN
XX
PD 27-FEB-2003.
XX
PP 14-AUG-2002; 2002WO-US025765.
PE
XX 14-AUG-2001; 2001US-0312147P.
XX PR 01-NOV-2001; 2001US-0346382P.
PR 26-NOV-2001; 2001US-0333347P.
XX
PA (GENO) GEN HOSPITAL CORP.
PA (FARB) BAYER AG.
PI
XX Woolf C, D'urso D, Befort K, Costigan M;
XX MPI; 2003-268312/26.
DR
XX GENDANK; AAC36317.
DR
XX
PT New composition comprising two or more isolated polypeptides, useful for
PT preparing a medicament for treating pain in an animal.
XX
PS Claim 1; Page: 1017pp; English.

The invention discloses a composition comprising two or more isolated rat
or human polynucleotides or a polynucleotide which represents a fragment,
derivative or allelic variation of the nucleic acid sequence. Also
claimed are a vector comprising the novel polynucleotide, a host cell
comprising the vector, a method for identifying a nucleotide sequence
which is differentially regulated in an animal subjected to pain and a
kit to perform the method, an array, a method for identifying an agent
that increases or decreases the expression of the polynucleotide sequence
that is differentially expressed in neuronal tissue of a first animal
subjected to pain, a method for identifying a compound which regulates
the expression of a polynucleotide sequence which is differentially
expressed in an animal subjected to pain, a method for identifying a
compound that regulates the activity of one or more of the
polynucleotides, a method for producing a pharmaceutical composition, a
method for identifying a compound or small molecule that regulates the
activity in an animal of one or more of the polypeptides given in the
specification, a method for identifying a compound useful in treating
pain and a pharmaceutical composition comprising the one or more
polypeptides or their antibodies. The polynucleotide or the compound that
modulates its activity is useful for preparing a medicament for treating
pain (e.g. spinal segmental nerve injury (SNII), chronic constriction
injury (CCI) and spared nerve injury (SNI)) in an animal (e.g. gene
therapy). The sequence presented is a rat protein (shown in Table 2 of
the specification) which is differentially expressed during pain. Note:
The sequence data for this patent did not form part of the printed
specification, but was obtained in electronic form directly from WIPO at
ftp.wipo.int/pub/published_pct_sequences.

Sequence 142 AA:

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Best Local Similarity 41.0%; Pred. No. 6.7e-10;
Matches 25; Conservative 19; Mismatches 14; Indels 3; Gaps 2;

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DB 77 QITRMEYHIDVQSRSNCRKPLNNNTNCIFQKNPKLEKKLSCSFVLGALFWNGEPDLS 136
QY 59 K 59
DB 137 K 137

RESULT 12
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ID ADD46704 standard; protein; 142 AA.
XX

[illegible][illegible]

GenCore version 5.1.6
Copyright (c) 1993 - 2004 CompuGen Ltd.

OM protein - protein search, using sw model

Run on: March 23, 2004, 17:07:14 ; Search time 13.0837 Seconds

(Without alignments)
232.804 Million cell updates/sec

Title: US-09-941-314-16

Perfect score: 334
Sequence: 1 RQVTDHLEHNLVEMQMTTC.....NCFPSVFAVPWEQYKILNK 59

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 389414 seqs, 51625971 residues

Total number of hits satisfying chosen parameters: 389414

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%

Listing first 45 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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2	142.5	42.7	142	3	US-09-617-302-3 Sequence 3, Appl1
3	112.5	33.7	142	3	US-09-431-480-4 Sequence 4, Appl1
4	112.5	33.7	142	3	US-09-617-302-4 Sequence 4, Appl1
5	107.5	32.2	141	3	US-09-431-480-2 Sequence 2, Appl1
6	107.5	32.2	141	3	US-09-617-302-2 Sequence 2, Appl1
7	99.5	29.8	116	4	US-09-775-932-16 Sequence 16, Appl1
8	99.5	29.8	139	2	US-08-791-522-4 Sequence 4, Appl1
9	99.5	29.8	139	3	US-09-314-777-4 Sequence 4, Appl1
10	99.5	29.8	139	4	US-08-849-303-15 Sequence 15, Appl1
11	97.5	29.2	127	4	US-08-849-303-19 Sequence 19, Appl1
12	93	27.8	146	6	5432264-6 Patent No. 5432264
13	90.5	27.1	130	4	US-09-775-932-2 Sequence 2, Appl1
14	90.5	27.1	130	6	5432264-4 Patent No. 5432264
15	90.5	27.1	145	2	US-08-832-535-11 Sequence 11, Appl1
16	90.5	27.1	146	2	US-08-791-522-3 Sequence 3, Appl1
17	90.5	27.1	146	3	US-08-744-138-3 Sequence 3, Appl1
18	90.5	27.1	146	3	US-09-019-485-4 Sequence 4, Appl1
19	90.5	27.1	146	3	US-09-314-777-3 Sequence 3, Appl1
20	90.5	27.1	146	3	US-09-431-480-6 Sequence 6, Appl1
21	90.5	27.1	146	3	US-09-617-302-6 Sequence 6, Appl1
22	90.5	27.1	146	4	US-09-241-376-3 Sequence 3, Appl1
23	90.5	27.1	146	4	US-09-528-436B-3 Sequence 3, Appl1
24	90.5	27.1	146	4	US-09-886-319A-47 Sequence 47, Appl1
25	90.5	27.1	146	4	US-09-940-497-3 Sequence 3, Appl1
26	90.5	27.1	146	4	US-09-976-594-37 Sequence 37, Appl1
27	90.5	27.1	146	4	US-08-849-303-17 Sequence 17, Appl1

28	90.5	27.1	146	5	PCT-US95-07135-9 Sequence 9, Appl1
29	89.5	26.8	122	4	US-09-775-932-10 Sequence 10, Appl1
30	89.5	26.8	142	3	US-08-744-138-4 Sequence 4, Appl1
31	89.5	26.8	142	3	US-09-431-480-7 Sequence 7, Appl1
32	89.5	26.8	142	3	US-09-617-302-7 Sequence 7, Appl1
33	89.5	26.8	142	4	US-09-241-376-4 Sequence 4, Appl1
34	89.5	26.8	142	4	US-09-940-497-4 Sequence 4, Appl1
35	89.5	26.8	142	4	US-09-976-594-358 Sequence 358, Appl1
36	89.5	26.8	142	4	US-08-849-303-20 Sequence 20, Appl1
37	88.5	26.5	140	4	US-09-886-319A-46 Sequence 46, Appl1
38	88.5	26.5	140	4	US-09-886-319A-48 Sequence 48, Appl1
39	86.5	25.9	121	4	US-09-775-932-8 Sequence 8, Appl1
40	86.5	25.9	141	3	US-08-744-138-6 Sequence 6, Appl1
41	86.5	25.9	141	4	US-09-241-376-6 Sequence 6, Appl1
42	86.5	25.9	141	4	US-09-940-497-6 Sequence 6, Appl1
43	86.5	25.9	141	4	US-08-849-303-24 Sequence 24, Appl1
44	86	25.7	145	2	US-08-832-535-2 Sequence 2, Appl1
45	86	25.7	145	3	US-09-019-485-2 Sequence 2, Appl1

ALIGNMENTS

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RESULT 1
US-09-431-480-3
; Sequence 3, Application US/09431480
; Patent No. 6235708
; GENERAL INFORMATION:
; APPLICANT: Holloway, James L.
; TITLE OF INVENTION: TESTIS SPECIFIC CYSTATIN-LIKE PROTEIN CYSTATIN T
; FILE REFERENCE: 98-72
; CURRENT APPLICATION NUMBER: US/09/431,480
; CURRENT FILING DATE: 1999-11-01
; EARLIER APPLICATION NUMBER: 60/109,217
; EARLIER FILING DATE: 1998-11-20
; EARLIER APPLICATION NUMBER: 60/156,382
; EARLIER FILING DATE: 1999-09-28
; NUMBER OF SEQ. ID NOS: 22
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ. ID NO 3
; LENGTH: 142
; TYPE: PRT
; ORGANISM: Mus musculus
US-09-431-480-3

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Best Local Similarity 41.0%; Pred. No. 1e-11;
Matches 25; Conservative 19; Mismatches 14; Indels 3; Gaps 2;

QY      2 QVTDHLEHNLVEMQMTTCOKP--ETTNVCVQER-ELHKOVNCFPSVFAVPWEQYKILN 58
      |||::||::||::||::||::||::||::||::||::||::||::||::||::||::||
Db      77 QVTDHLEHNLVEMQMTTCOKP--ETTNVCVQER-ELHKOVNCFPSVFAVPWEQYKILN 136

QY      59 K 59
Db      137 K 137

RESULT 2
US-09-617-302-3
; Sequence 3, Application US/09617302
; Patent No. 6245529
; GENERAL INFORMATION:
; APPLICANT: Holloway, James L.
; TITLE OF INVENTION: TESTIS SPECIFIC CYSTATIN-LIKE PROTEIN CYSTATIN T
; FILE REFERENCE: 98-72 C1
; CURRENT APPLICATION NUMBER: US/09/617,302
; CURRENT FILING DATE: 2000-07-17
; PRIOR APPLICATION NUMBER: 09/431,480
; PRIOR FILING DATE: 1999-11-01
; PRIOR APPLICATION NUMBER: 60/109,217

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1 PRIOR FILING DATE: 1998-11-20
2 PRIOR APPLICATION NUMBER: 60/156,382
3 PRIOR FILING DATE: 1999-09-28
4 NUMBER OF SEQ ID NOS: 22
5 SOFTWARE: FastSeq for Windows Version 3.0
6 SEQ ID NO: 3
7 LENGTH: 142
8 TYPE: PRT
9 ORGANISM: Mus musculus
10 OS-09-617-302-3

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       |||::||::|||::|||::|||::|||::|||::|||::|||::|||::|||::|||
DB     77 QITDMEYQIDVQISRSNCKPLNTENCIPQKKPELEKMSSFLVGALLPMNGEFNLIS 136
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QY	59 K 59
Db	137 K 137

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RESULT 3
US-09-431-480-4
; Sequence 4, Application US/09431480
; Patent No. 6235708
; GENERAL INFORMATION:
; APPLICANT: Holloway, James L.
; APPLICANT: Felshaus, Andrew
; TITLE OF INVENTION: TESTIS SPECIFIC CYSTATIN-LIKE PROTEIN CYSTATIN L
; FILE REFERENCE: 98-72
; CURRENT APPLICATION NUMBER: US/09/431,480
; EARLIER FILING DATE: 1999-11-01
; EARLIER APPLICATION NUMBER: 60/109,217
; EARLIER FILING DATE: 1998-11-20
; EARLIER APPLICATION NUMBER: 60/156,382
; EARLIER FILING DATE: 1999-09-28
; NUMBER OF SEQ ID NOS: 22
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 4
; LENGTH: 142
; TYPE: PRT
; ORGANISM: Homo sapiens
; US-09-431-480-4

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Query Match	33.7%	Score 112.5	DB 3	Length 142
Best Local Similarity	39.3%	Pred No. 1.2e-07		
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Dy 2 QVTDLHSLHLAVEMQRTTCKKETT--CVPOER-ELHKQVNCPSFVPAPMFDYKIILN 58
||| : ||| : ||| : ||| : ||| : ||| : ||| : ||| : ||| : ||| : ||| : ||| : ||| :
Db 77 QVTNLLEYLLIDVEIARSDCRKPASTNEICAIQENSKLKKRLSCSFLVGALPMNGEFTVME 13

QY	59	K	59
		—	
Db	137	K	137

RESULT 4
 US-09-617-302-4
 ; Sequence 4, Application US/09617302
 ; Patent No. 6245529
 ; GENERAL INFORMATION
 ; APPLICANT: Holloway, James L.
 ; APPLICANT: Feldhaus, Andrew
 ; TITLE OF INVENTION: TESTS SPECIFIC CYSTATIN-LIKE PROTEIN CYSTATIN T
 ; FILE REFERENCE: 98-72 C1
 ; CURRENT APPLICATION NUMBER: US/09/617,302
 ; CURRENT FILING DATE: 2000-07-17
 ; PRIORITY APPLICATION NUMBER: 09/431,480
 ; PRIORITY FILING DATE: 1999-11-01

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? PRIOR APPLICATION NUMBER: 60/109,217
? PRIOR FILING DATE: 1998-11-20
? PRIOR APPLICATION NUMBER: 60/156,382
? PRIOR FILING DATE: 1999-09-28
? NUMBER OF SEQ ID NOS: 22
? SOFTWARE: FASTSEQ for Windows Version 3.0
? SEQ ID NO 4
? LENGTH: 142
? TYPE: PR1
? ORGANISM: Homo sapiens
? OS-09-617-302-4

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Query Match	33.7%	Score 112.5	DB 3	Length 142
Best Local Similarity	39.3%	Pred. No. 1.2e-07		
Matches 24	Conservative 17	Mismatches 17	Indels 3	Gaps 2

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Qy      2 QVTDHLEHYHNVEKMTTCQKPETT--CVYGR-ELHKQVNCFFSYFAVPMEQYKILN 58
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Db     77 QVTNMLEYLIDVEIKRSDCKRPSTNEICAIQENSKLKRKLSCSFLVGALPMNGEFTWAE 136
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QY 59 K 59
Db 137 K 137

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RESULT 5
US-09-431-480-2
; Sequence 2, Application US/09431480
; Patent No. 6235708
; GENERAL INFORMATION:
; APPLICANT: Holloway, James L.
; APPLICANT: Feldhaus, Andrew
; TITLE OF INVENTION: TESTIS SPECIFIC CYSTATIN-LIKE PROTEIN CYSTATIN T
; FILE REFERENCE: 98-72
; CURRENT APPLICATION NUMBER: US/09/431,480
; EARLIER FILING DATE: 1999-11-01
; EARLIER APPLICATION NUMBER: 60/109,217
; EARLIER FILING DATE: 1998-11-20
; EARLIER APPLICATION NUMBER: 60/156,382
; EARLIER FILING DATE: 1999-09-28
; NUMBER OF SEQ ID NOS: 22
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 2
; LENGTH: 141
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-431-480-2

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Best Local Similarity	39.3%	Pred. No. 5.6e-07		
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 Db 76 QITTSLEYEYEVNIARTMCKKIAGDNENCLFQQDPKKMKWECIFIVSSSKPWKEELKLIK 135

QY 59 K 59
Db 136 K 136

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RESULT 6
US-09-617-302-2
; Sequence 2, Application US/09617302
; Patent No. 6245529
; GENERAL INFORMATION:
; APPLICANT: Holloway, James L.
; APPLICANT: Feldhaus, Andrew
; TITLE OF INVENTION: TESTIS SPECIFIC CYSTATIN-LIKE PROTEIN CYSTATIN T
; FILE REFERENCE: 98-72 C1
; CURRENT APPLICATION NUMBER: US/09/617,302
; CURRENT FILING DATE: 2000-07-17
; PRIOR APPLICATION NUMBER: 09/431,480

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TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-855-0555
TELEFAX: 415-845-4166
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 139 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
IMMEDIATE SOURCE:
LIBRARY: GenBank
CLONE: 118195
US-09-314-777-4

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Best Local Similarity 36.7%; Pred. No. 6.7e-06;
Matches 22; Conservative 11; Mismatches 24; Indels 3; Gaps 2;

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DB 75 RQVSGIKYILQVEIGRTTCPSKSGDLQSCFHFDEPMAYTCTTFVYSIPMLNQIKL 134

RESULT 10
US-08-849-303-15
Sequence 15, Application US/08849303
Patent No. 6680424
GENERAL INFORMATION:
APPLICANT: Atkinson, Howard J.
APPLICANT: McPherson, Michael J.
APPLICANT: Urvain, Peter E.
TITLE OF INVENTION: MODIFIED PROTEINASE INHIBITORS
NUMBER OF SEQUENCES: 79
CORRESPONDENCE ADDRESS:
ADDRESSER: Klauber & Jackson
STREET: 411 Hackensack Avenue, 4th Floor
CITY: Hackensack
STATE: New Jersey
COUNTRY: USA
ZIP: 07601
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/849,303
FILING DATE: 21-MAY-1997
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: Jackson Bag., David A.
REGISTRATION NUMBER: 26,742
REFERENCE/DOCKET NUMBER: 1321-1-003
TELECOMMUNICATION INFORMATION:
TELEPHONE: 201-487-5800
TELEFAX: 201-343-1684
TELEX: 133521
INFORMATION FOR SEQ ID NO: 15:
SEQUENCE CHARACTERISTICS:
LENGTH: 139 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
HYPOTHEICAL: NO
US-08-849-303-15

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RESULT 11
US-08-849-303-19
Sequence 19, Application US/08849303
Patent No. 6680424
GENERAL INFORMATION:
APPLICANT: Atkinson, Howard J.
APPLICANT: McPherson, Michael J.
APPLICANT: Urvain, Peter E.
TITLE OF INVENTION: MODIFIED PROTEINASE INHIBITORS
NUMBER OF SEQUENCES: 79
CORRESPONDENCE ADDRESS:
ADDRESSER: Klauber & Jackson
STREET: 411 Hackensack Avenue, 4th Floor
CITY: Hackensack
STATE: New Jersey
COUNTRY: USA
ZIP: 07601
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/849,303
FILING DATE: 21-MAY-1997
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: Jackson Bag., David A.
REGISTRATION NUMBER: 26,742
REFERENCE/DOCKET NUMBER: 1321-1-003
TELECOMMUNICATION INFORMATION:
TELEPHONE: 201-487-5800
TELEFAX: 201-343-1684
TELEX: 133521
INFORMATION FOR SEQ ID NO: 19:
SEQUENCE CHARACTERISTICS:
LENGTH: 127 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
HYPOTHEICAL: NO
US-08-849-303-19

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RESULT 12
5432264-6
Patent No. 5432264
APPLICANT: GRUBB, ANDERS; LUNDWALL, AKE; ABRAHAMSON, MAGNUS;
DALBOGE, HENRIK
TITLE OF INVENTION: RECOMBINANT 3-DES-OH-CYSTATIN C PRODUCED
BY EXPRESSION IN A PROCAROTIC HOST CELL
NUMBER OF SEQUENCES: 8
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/929,290
FILING DATE: 13-AUG-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 440,221
FILING DATE: 21-NOV-1989
APPLICATION NUMBER: 297,198
FILING DATE: 20-MAY-1988
SEQ ID NO: 6;

GenCore version 5.1.6
Copyright (c) 1993 - 2004 CompuGen Ltd.

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Run on: March 23, 2004, 17:10:34 ; Search time 31.8452 Seconds
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Title: US-09-941-314-16

Perfect score: 334

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Post-processing: Minimum Match 0%

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18: /cgn2_6/ptodata/1/pubppa/US60_PUBCOMB.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB	ID	Description
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3	334	100.0	115	9	US-09-941-314-3	Sequence 1, Appl
4	334	100.0	117	9	US-09-941-314-4	Sequence 4, Appl
5	334	100.0	137	9	US-09-941-314-2	Sequence 2, Appl
6	273	81.7	48	9	US-09-941-314-17	Sequence 17, Appl
7	194	58.1	52	9	US-09-941-314-14	Sequence 14, Appl
8	189	56.6	33	9	US-09-941-314-12	Sequence 12, Appl
9	154	46.1	46	9	US-09-941-314-10	Sequence 10, Appl
10	154	46.1	49	9	US-09-941-314-13	Sequence 13, Appl
11	138	41.3	24	9	US-09-941-314-11	Sequence 11, Appl
12	111	33.2	145	9	US-09-740-638-2	Sequence 2, Appl
13	111	33.2	145	13	US-10-006-467-2	Sequence 2, Appl
14	111	33.2	145	14	US-10-235-148-2	Sequence 2, Appl
15	111	33.2	165	9	US-09-740-638-5	Sequence 5, Appl

16	111	33.2	165	13	US-10-006-467-5	Sequence 5, Appl
17	111	33.2	165	14	US-10-235-148-5	Sequence 5, Appl
18	106	31.7	145	14	US-10-168-425-14	Sequence 14, Appl
19	99.5	29.8	116	9	US-09-775-932-16	Sequence 16, Appl
20	99.5	29.8	139	8	US-08-849-303-15	Sequence 15, Appl
21	99.5	29.8	139	9	US-09-969-834-4	Sequence 4, Appl
22	99.5	29.8	148	12	US-10-257-174-42	Sequence 42, Appl
23	97.5	29.2	127	8	US-08-849-303-19	Sequence 19, Appl
24	97	29.0	138	14	US-10-239-663-37	Sequence 37, Appl
25	96.5	28.9	138	10	US-09-873-135-2	Sequence 2, Appl
26	94	28.1	132	9	US-09-921-180-2	Sequence 2, Appl
27	90.5	27.1	120	9	US-09-775-932-2	Sequence 2, Appl
28	90.5	27.1	146	8	US-08-849-303-17	Sequence 17, Appl
29	90.5	27.1	146	9	US-09-940-497-3	Sequence 3, Appl
30	90.5	27.1	146	9	US-09-969-834-3	Sequence 3, Appl
31	90.5	27.1	146	14	US-10-329-428-3	Sequence 3, Appl
32	90.5	27.1	146	14	US-10-376-564-47	Sequence 47, Appl
33	89.5	26.8	122	9	US-09-775-932-10	Sequence 10, Appl
34	89.5	26.8	142	8	US-08-849-303-20	Sequence 20, Appl
35	89.5	26.8	142	9	US-09-940-497-4	Sequence 4, Appl
36	89.5	26.8	142	12	US-10-262-839-132	Sequence 132, App
37	88.5	26.5	140	14	US-10-376-564-46	Sequence 46, Appl
38	88.5	26.5	140	14	US-10-376-564-48	Sequence 48, Appl
39	86.5	25.9	121	9	US-09-775-932-8	Sequence 8, Appl
40	86.5	25.9	141	8	US-08-849-303-24	Sequence 24, Appl
41	86.5	25.9	141	9	US-09-940-497-6	Sequence 6, Appl
42	86	25.7	145	14	US-10-329-428-2	Sequence 2, Appl
43	86	25.7	167	10	US-09-746-783-197	Sequence 197, App
44	84.5	25.3	140	8	US-08-849-303-18	Sequence 18, Appl
45	83.5	25.0	96	12	US-10-351-334-334	Sequence 334, App

ALIGNMENTS

RESULT 1

US-09-941-314-16

Sequence 16, Application US/09941314

Patent No. US20020142396A1

GENERAL INFORMATION:

APPLICANT: ZymoGenetics, Inc.

TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to Inhibit Cancer Procoagulant Protein

FILE REFERENCE: 00-81PC

CURRENT APPLICATION NUMBER: US/09/941,314

CURRENT FILING DATE: 2001-08-29

PRIOR APPLICATION NUMBER: 60/230,230

PRIOR FILING DATE: 2001-09-01

NUMBER OF SEQ ID NOS: 19

SOFTWARE: FASTSEQ for Windows Version 4.0

SEQ ID NO 16

LENGTH: 59

TYPE: PRT

ORGANISM: Homo sapiens

US-09-941-314-16

Query Match 100.0%; Score 334; DB 9; Length 59;

Best Local Similarity 100.0%; Pred. No. 3.8e-35;

Matches 59; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

DB 1 RQVTDHLEHYLANVEMQWTCOKPDTTCVPOERELHKQVCFVSFAVPWFQYKILNK 59

RESULT 2

US-09-941-314-15

Sequence 15, Application US/09941314

Patent No. US20020142396A1

GENERAL INFORMATION:

APPLICANT: ZymoGenetics, Inc.

TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to Inhibit Cancer Procoagulant Protein

FILE REFERENCE: 00-81PC
CURRENT APPLICATION NUMBER: US/09/941,314
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
NUMBER OF SEQ ID NOS: 19
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 15
LENGTH: 80
TYPE: PRF
ORGANISM: Homo sapiens
US-09-941-314-15

Query Match 100.0%; Score 334; DB 9; Length 80;
Best Local Similarity 100.0%; Pred. No. 5,4e-35;
Matches 59; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 RQVTDHLEHYHLNVMQWTTCCQKPEPTTNCVQERELHKQVNCFFSVFVAVPWFEOYKILNK 59
DB 22 RQVTDHLEHYHLNVMQWTTCCQKPEPTTNCVQERELHKQVNCFFSVFVAVPWFEOYKILNK 80

RESULT 3
US-09-941-314-3
Sequence 3, Application US/09941314
Patent No. US20020142396A1
GENERAL INFORMATION:
APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
FILE REFERENCE: 00-81PC
CURRENT APPLICATION NUMBER: US/09/941,314
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
NUMBER OF SEQ ID NOS: 19
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 3
LENGTH: 115
TYPE: PRF
ORGANISM: Homo sapiens
US-09-941-314-3

Query Match 100.0%; Score 334; DB 9; Length 115;
Best Local Similarity 100.0%; Pred. No. 8,2e-35;
Matches 59; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 RQVTDHLEHYHLNVMQWTTCCQKPEPTTNCVQERELHKQVNCFFSVFVAVPWFEOYKILNK 59
DB 52 RQVTDHLEHYHLNVMQWTTCCQKPEPTTNCVQERELHKQVNCFFSVFVAVPWFEOYKILNK 110

RESULT 4
US-09-941-314-4
Sequence 4, Application US/09941314
Patent No. US20020142396A1
GENERAL INFORMATION:
APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
FILE REFERENCE: 00-81PC
CURRENT APPLICATION NUMBER: US/09/941,314
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
NUMBER OF SEQ ID NOS: 19
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 4
LENGTH: 117
TYPE: PRF
ORGANISM: Homo sapiens
US-09-941-314-4

Query Match 100.0%; Score 334; DB 9; Length 117;
Best Local Similarity 100.0%; Pred. No. 8,3e-35;
Matches 59; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 RQVTDHLEHYHLNVMQWTTCCQKPEPTTNCVQERELHKQVNCFFSVFVAVPWFEOYKILNK 59
DB 54 RQVTDHLEHYHLNVMQWTTCCQKPEPTTNCVQERELHKQVNCFFSVFVAVPWFEOYKILNK 112

RESULT 5
US-09-941-314-2
Sequence 2, Application US/09941314
Patent No. US20020142396A1
GENERAL INFORMATION:
APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
FILE REFERENCE: 00-81PC
CURRENT APPLICATION NUMBER: US/09/941,314
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
NUMBER OF SEQ ID NOS: 19
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 2
LENGTH: 137
TYPE: PRF
ORGANISM: Homo sapiens
US-09-941-314-2

Query Match 100.0%; Score 334; DB 9; Length 137;
Best Local Similarity 100.0%; Pred. No. 1e-34;
Matches 59; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 RQVTDHLEHYHLNVMQWTTCCQKPEPTTNCVQERELHKQVNCFFSVFVAVPWFEOYKILNK 59
DB 74 RQVTDHLEHYHLNVMQWTTCCQKPEPTTNCVQERELHKQVNCFFSVFVAVPWFEOYKILNK 132

RESULT 6
US-09-941-314-17
Sequence 17, Application US/09941314
Patent No. US20020142396A1
GENERAL INFORMATION:
APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
FILE REFERENCE: 00-81PC
CURRENT APPLICATION NUMBER: US/09/941,314
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
NUMBER OF SEQ ID NOS: 19
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 17
LENGTH: 48
TYPE: PRF
ORGANISM: Homo sapiens
US-09-941-314-17

Query Match 81.7%; Score 273; DB 9; Length 48;
Best Local Similarity 100.0%; Pred. No. 1,9e-27;
Matches 48; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 12 NVEMQWTTCCQKPEPTTNCVQERELHKQVNCFFSVFVAVPWFEOYKILNK 59
DB 1 NVEMQWTTCCQKPEPTTNCVQERELHKQVNCFFSVFVAVPWFEOYKILNK 48

RESULT 7
US-09-941-314-14
Sequence 14, Application US/09941314
Patent No. US20020142396A1

```
; GENERAL INFORMATION:
; APPLICANT: ZymoGenetics, Inc.
; TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
; FILE REFERENCE: 00-81PC
; CURRENT APPLICATION NUMBER: US/09/941,314
; CURRENT FILING DATE: 2001-08-29
; PRIOR APPLICATION NUMBER: 60/230,230
; PRIOR FILING DATE: 2001-09-01
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 12
; LENGTH: 52
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-941-314-14

Query Match          58.1%; Score 194; DB 9; Length 52;
Best Local Similarity 100.0%; Pred. No. 2,5e-17;
Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Cy 1 ROVTDHLEHYHNVEMQWTTCKPPTNCVPOERE 34
Db 19 ROVTDHLEHYHNVEMQWTTCKPPTNCVPOERE 52

RESULT 8
US-09-941-314-12
; Sequence 12, Application US/09941314
; Patent No. US20020142396A1
; GENERAL INFORMATION:
; APPLICANT: ZymoGenetics, Inc.
; TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
; FILE REFERENCE: 00-81PC
; CURRENT APPLICATION NUMBER: US/09/941,314
; CURRENT FILING DATE: 2001-08-29
; PRIOR APPLICATION NUMBER: 60/230,230
; PRIOR FILING DATE: 2001-09-01
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 12
; LENGTH: 33
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-941-314-12

Query Match          56.6%; Score 189; DB 9; Length 33;
Best Local Similarity 100.0%; Pred. No. 6,6e-17;
Matches 33; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Cy 2 QVTDHLEHYHNVEMQWTTCKPPTNCVPOERE 34
Db 1 QVTDHLEHYHNVEMQWTTCKPPTNCVPOERE 33

RESULT 9
US-09-941-314-10
; Sequence 10, Application US/09941314
; Patent No. US20020142396A1
; GENERAL INFORMATION:
; APPLICANT: ZymoGenetics, Inc.
; TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
; FILE REFERENCE: 00-81PC
; CURRENT APPLICATION NUMBER: US/09/941,314
; CURRENT FILING DATE: 2001-08-29
; PRIOR APPLICATION NUMBER: 60/230,230
; PRIOR FILING DATE: 2001-09-01
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 10
; LENGTH: 46
```

```
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-941-314-10

Query Match          46.1%; Score 154; DB 9; Length 46;
Best Local Similarity 100.0%; Pred. No. 2,9e-12;
Matches 27; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Cy 1 ROVTDHLEHYHNVEMQWTTCKPPTN 27
Db 20 ROVTDHLEHYHNVEMQWTTCKPPTN 46

RESULT 10
US-09-941-314-13
; Sequence 13, Application US/09941314
; Patent No. US20020142396A1
; GENERAL INFORMATION:
; APPLICANT: ZymoGenetics, Inc.
; TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
; FILE REFERENCE: 00-81PC
; CURRENT APPLICATION NUMBER: US/09/941,314
; CURRENT FILING DATE: 2001-08-29
; PRIOR APPLICATION NUMBER: 60/230,230
; PRIOR FILING DATE: 2001-09-01
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 13
; LENGTH: 49
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-941-314-13

Query Match          46.1%; Score 154; DB 9; Length 49;
Best Local Similarity 100.0%; Pred. No. 3,1e-12;
Matches 27; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Cy 1 ROVTDHLEHYHNVEMQWTTCKPPTN 27
Db 23 ROVTDHLEHYHNVEMQWTTCKPPTN 49

RESULT 11
US-09-941-314-11
; Sequence 11, Application US/09941314
; Patent No. US20020142396A1
; GENERAL INFORMATION:
; APPLICANT: ZymoGenetics, Inc.
; TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
; FILE REFERENCE: 00-81PC
; CURRENT APPLICATION NUMBER: US/09/941,314
; CURRENT FILING DATE: 2001-08-29
; PRIOR APPLICATION NUMBER: 60/230,230
; PRIOR FILING DATE: 2001-09-01
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 11
; LENGTH: 24
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-941-314-11

Query Match          41.3%; Score 138; DB 9; Length 24;
Best Local Similarity 100.0%; Pred. No. 1,5e-10;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Cy 1 ROVTDHLEHYHNVEMQWTTCKP 24
Db 1 ROVTDHLEHYHNVEMQWTTCKP 24
```


GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: March 23, 2004, 17:06:09 ; Search time 10.8619 seconds
(without alignments)
522.495 Million cell updates/sec

Title: US-09-941-314-16

Perfect score: 334
Sequence: 1 RQVTDHLEHYLANVEMQWTC.....NCFPSVFAVPMPEQYKILNK 59

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 283366 seqs, 96191526 residues

Total number of hits satisfying chosen parameters: 283366

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database :

1: PIR_78:*
2: PIR1:*
3: PIR2:*
4: PIR3:*
5: PIR4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	142.5	42.7	139	2 A45361	cystatin-related e
2	99.5	29.8	139	1 UDCH	cystatin precursor
3	97.5	29.2	120	2 S10587	cystatin C - rat
4	97.5	29.2	127	2 S07085	cystatin C precurs
5	90.5	27.1	146	1 UDHU	cystatin C precurs
6	89.5	26.8	142	2 A47142	cystatin D precurs
7	86.5	25.9	141	2 B29632	cystatin SA precurs
8	84.5	25.3	140	2 A36163	cystatin C precurs
9	83	24.9	111	2 A28793	cystatin - puff ad
10	82.5	24.7	112	1 UDHO	cystatin - bovine
11	82.5	24.7	141	1 UDHU1	cystatin S precurs
12	77.5	23.2	141	1 UDHU2	cystatin SN precurs
13	72	21.6	111	1 UC2040	cystatin - chum sa
14	69	20.7	1779	2 T23130	hypothetical prote
15	68.5	20.5	134	1 KGBOL2	kininogen, LMW II
16	68.5	20.5	619	1 KGBOL2	kininogen, LMW II
17	67.5	20.2	436	1 KGBOL1	kininogen, LMW I
18	67.5	20.2	621	1 KGBOL1	kininogen, LMW I
19	64	19.2	132	2 UC4918	cystatin precursor
20	63.5	19.0	644	1 KGHU1	kininogen, LMW pre
21	63.5	18.9	644	1 KGHU1	kininogen, LMW pre
22	63	18.9	141	2 JQ1470	cystatin S precurs
23	60	18.0	3411	1 GNMVY	genome polypeptide
24	60	18.0	3411	1 GNMVY	genome polypeptide
25	59.5	17.8	1275	1 T49362	hypothetical prote
26	59	17.7	426	2 A40440	endothelin 1 and 2
27	58.5	17.5	164	2 C90442	conserved hypother
28	58.5	17.5	447	2 T19078	hypothetical prote
29	58	17.4	302	2 B96520	hypothetical prote

30	57	17.1	455	2 T15622	hypothetical prote
31	56.5	16.9	324	2 T41379	probable phosphati
32	56	16.8	295	2 C43718	hypothetical prote
33	56	16.8	367	2 E75384	conserved hypother
34	56	16.8	427	2 A44158	endothelin recepto
35	56	16.8	427	2 S13424	probable chromosom
36	56	16.8	1163	2 F84669	hypothetical prote
37	55.5	16.6	555	2 T24671	hypothetical prote
38	55.5	16.6	938	2 T41932	hypothetical prote
39	55.5	16.6	4540	2 T30838	cytoplasmic dynein
40	55	16.5	174	1 TVP2A	small T antigen -
41	55	16.5	213	2 B84333	isopentenyl pyroph
42	55	16.5	218	2 A34445	25K calcium-bindin
43	55	16.5	560	2 S27387	interferon alpha r
44	54.5	16.3	243	1 JQ0021	ubiquitin-cytochro
45	54.5	16.3	293	2 A40644	transcription regu

ALIGNMENTS

RESULT 1
A45361
cystatin-related epididymal specific protein - mouse (fragment)
C:Species: Mus musculus (house mouse)
C>Date: 10-Jun-1993 #sequence_revision 18-Nov-1994 #text_change 05-Nov-1999
C:Accession: A45361
R:Corwall, G.A.; Orgebin-Crist, M.C.; Hann, S.R.
Mol. Endocrinol. 6, 1653-1664, 1992
A:Title: The CREB gene: a unique testis-regulated gene related to the cystatin family is
A:Reference number: A45361; MUID:33078799; PMID:1280328
A:Accession: A45361
A:Status: Preliminary; not compared with conceptual translation
A:Molecule type: nucleic acid
A:Residues: 1-139 <COR>
A:Cross-references: GB:549926; NID:9260492; PIDN:AAC35390.1; PID:9260493
A:Note: sequence extracted from NCBI backbone (NCBI:P:118813)
C:Superfamily: cystatin; cystatin homology
F:28-135/Domain: cystatin homology <CTS>

Query Match 42.7%; Score 142.5; DB 2; Length 139;
Best Local Similarity 41.0%; Pred. No. 6.3e-10;
Matches 25; Conservative 19; Mismatches 14; Indels 3; Gaps 2;

Qy 2 QVTDHLEHYLANVEMQWTCQRP--ETTCVQPER-ELHKVNCFFSVFAVPMPEQYKILNK 58
Db 74 QITRMEYQIDVOISRNCKKPLNNTENCIPQKKPELEKXKSCSFLVGALEPMNGEPNLS 133
Qy 59 K 59
Db 134 K 134

RESULT 2

UDCH
cystatin precursor - chicken
N:Alternate names: cystatin I; cysteine proteinase inhibitor; egg-white cystatin
C:Species: Gallus gallus (chicken)
C>Date: 03-Aug-1984 #sequence_revision 12-Apr-1996 #text_change 29-Oct-1999
C:Accession: A34456; A01274; S01461; S48159; S04008; JN0769
R:Coella, R.; Sakaguchi, Y.; Nagase, H.; Bird, J.W.C.
J. Biol. Chem. 264, 17164-17169, 1989
A:Title: Chicken egg white cystatin. Molecular cloning, nucleotide sequence, and tissue
A:Reference number: A34456; MUID:90008873; PMID:2793849
A:Accession: A34456
A:Molecule type: mRNA
A:Residues: 1-139 <COL>
A:Cross-references: GB:050577; NID:9211714; PIDN:AAA48744.1; PID:9211715
R:Schwabe, C.; Anastasi, A.; Crow, H.; McDonald, J.K.; Barrett, A.J.
Biochem. J. 217, 813-817, 1984
A:Title: Cystatin. Amino acid sequence and possible secondary structure.
A:Reference number: A01274; MUID:84178305; PMID:6712597
A:Accession: A01274

A:Molecule type: protein
A:Residues: 24-139 <SCH>
R:Turk, V.; Brzin, J.; Longer, M.; Ritonja, A.; Eropkin, M.; Borchardt, U.; Machleidt, W.
Hope-Seyler's Z. Physiol. Chem. 364, 1487-1496, 1963
A>Title: Protein inhibitors of cysteine proteinases. III. Amino-acid sequence of cystatins
A:Reference number: S01461; PMID:84110059; PMID:6662498
A:Accession: S01461
A:Molecule type: protein
A:Residues: 24-139 <TUR>
R:Amanstasi, A.; Brown, M.A.; Kembhavi, A.A.; Nicklin, M.J.H.; Sayers, C.A.; Sunter, D.C.
Biochem. J. 211, 129-138, 1983
A>Title: Cystatin, a protein inhibitor of cysteine proteinases. Improved purification from
A:Reference number: A37514; PMID:83256421; PMID:6409085
A:Contents: annotation; characterization of protein
R:Grubb, A.; Lofberg, H.; Barrett, A.U.
FEBS Lett. 170, 370-374, 1984
A>Title: The disulfide bridges of human cystatin C (gamma-trace) and chicken cystatin.
A:Reference number: S01462
A:Contents: annotation; disulfide bonds
R:Auerswald, E.A.; Neegler, D.K.; Schulze, A.U.; Engn, R.A.; Gensenger, G.; Machleidt, W.
Eur. J. Biochem. 224, 407-415, 1994
A>Title: Production, inhibitory activity, folding and conformational analysis of an N-term
A:Reference number: S48159; PMID:95010016; PMID:7923534
A:Accession: S48159
A>Status: preliminary
A:Molecule type: protein
A:Residues: 24-139 <ABE>
R:Lauer, B.; Krieglstein, K.; Henschel, A.; Kos, J.; Turk, V.; Huber, R.; Bode, W.
FEBS Lett. 248, 162-168, 1989
A>Title: The cysteine proteinase inhibitor chicken cystatin is a phosphoprotein.
A:Reference number: S04008; PMID:89252033; PMID:2721673
A:Accession: S04008
A:Molecule type: protein
A:Residues: 97-114 <LAB>
R:Colella, R.; Bird, J.W.C.
Gene 130, 175-181, 1993
A>Title: Isolation and characterization of the chicken cystatin-encoding gene: Mapping t
A:Accession: UN0789
A:Molecule type: DNA
A:Residues: 1-139 <CO2>
A:Cross-references: GB:M95725
A>Note: authors failed to translate the codon for residue 115-Tyr
C:Comment: This protein binds tightly to and inhibits a variety of cysteine proteinases
C:Genetics:
A:Gene: Can
A:Insertions: 76/3; 114/3
C:Superfamily: cystatin; cystatin homology
C:Keywords: cysteine proteinase inhibitor; egg white; phosphoprotein
F:1-23/Domains: signal sequence #status predicted <SIG>
F:24-139/Product: cystatin, long form #status experimental <CLRF>
F:30-139/Domains: cystatin homology <CVS>
F:32-139/Product: cystatin, short form #status experimental <CYSP>
F:76-80/Region: inhibitory #status predicted
F:94-104, 118-138/Disulfide bonds: #status experimental
F:103/Binding site: phosphate (Ser) (covalent) (partial) #status experimental

Query Match 29.8%; Score 99.5; DB 1; Length 139;
Best Local Similarity 36.7%; Pred. No. 9.3e-05;
Matches 22; Conservative 11; Mismatches 24; Indels 3; Gaps 2;

OY 1 ROWTDHLEHLNEMQWTTCKP--ETTN-C-VPOREELHKVNCFFSVFAVPWFEOYKIL 57
:::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|
Db 75 ROLVSGIKYIQLQVEIGRTTCRKSSGDDLSCEFHDEPEAKYTKCTCFVVYSIPMNIQKL 134

RESULT 3
S10587
cystatin C - rat
C/Species: Rattus sp. (rat)
C/Date: 21-Nov-1993 #sequence_revision 03-Nov-1995 #text_change 16-Jul-1999
C/Accession: S10587
E:Bernard, F.; Esnard, A.; Faucher, D.; Capony, J.P.; Derancourt, J.; Brilliard, M.; Gauthey,

Biol. Chem. Hoppe-Seyler 371 (Suppl.), 161-166, 1990
A1:Title: Rat Cystatin C: the complete amino acid sequence reveals a site for N-glycosylation
A1:Reference number: S10587; MUID:90J80276; PMID:2400577
A1:Accession: S10587
A1:Status: preliminary
A1:Molecule type: protein
A1:Residues: 1-120 <ESN>
A1:Note: 43-Asn was also found
A1:Note: the sequence from Fig. 2 is inconsistent with that from Fig. 1 in having 18-Ala
C:Superfamily: cystatin; cystatin homology
F:9-120/D:domain: cystatin homology <CYS>

	Query Match	29.2%	Score 97.5;	DB 2;	Length 120;
	Best Local Similarity	37.7%	Pred.	0.00014;	
Matches	Conservative	20;	Mismatches	18;	Gaps 3;
	Indels	2;			
Cy	1	RQVNDHLEYNHMOWMTCCCKPCT--TNC-VPERERLHKOVNFFSFAVPW	50		
	:	:::		:::	:::
	:	:::		:::	:::
	:	:::		:::	:::
Db	54	KQLVAGNIYIVDVENGRITCKSGTNLTNCFPHQPIHLRKALCSFOIYSVPM	106		

RESULT 4
S07085

cystatin C precursor - rat (treatment)
C.Species: Rattus norvegicus (Norway rat)
C.Date: 01-Dec-1993 #sequence revision 03-Aug-1995 #ext_change 16-Jul-1999
C.Accession: S07085; S01337; S21109
R.Cole, T.; Dickson, P.W.; Ennard, F.; Averill, S.; Risbridger, G.P.; Gauchier, F.; Schreier, J. Biochem. 186, 35-42, 1989
A>Title: The cDNA structure and expression analysis of the genes for the cysteine protease
A.Reference number: S07085; MUID:90092122; PMID:2689174
A.Accession: S07085
A.Status: preliminary
A.Molecule type: mRNA
A.Residues: 1-127 <COL>
A.Cross-References: EMBL:X16557; NID:G56041; PIDN:CAA34831.1; PID:G736290
R.Ennard, A.; Ennard, F.; Faucher, D.; Gauchier, F.
FEBS Lett. 236, 475-478, 1988
A>Title: Two rat homologues of human cystatin C.
A.Reference number: S01337; MUID:88313020; PMID:3044831
A.Accession: S01337
A.Molecule type: protein
A.Residues: 8-49 <ESN>
R.Ennard, A.; Ennard, F.; Guillou, F.; Gauchier, F.
FEBS Lett. 300, 131-135, 1992
A>Title: Production of the cysteine proteinase inhibitor cystatin C by rat Sertoli cells
A.Reference number: S21109; MUID:92225121; PMID:1563513
A.Accession: S21109
A.Molecule type: protein
A.Residues: 8,'XX',11-20 <ES2>
C.Superfamily: cystatin; cystatin homology
C.Keywords: cysteine proteinase inhibitor
F.16-127/Domain: cystatin homology <CYS>
F.180-90,104-124/Disulfide bonds: #status predicted

Query Match 29.2%; Score 97.5; DB 2; Length 127;
Best Local Similarity 37.7%; Pred. No. 0.00015;
Matches 20; Conservative 12; Mismatches 18; Indels 3; Gaps 2;

QY 1 RQVTHLETHLVNEMQWTCCKPER--TNC-VPGERELKQNVNCFSPVAPW 50
 |:::||||||| |::| |::| |::| |::| |::| |::| |::|
Db 61 KQLVAGINVIYLDEMGRTCTKSQTNLINCPRPDHMLRKALCSFIYSVP 113

RESULT 5
UDHU
cystatin C precursor [validated] - human
N.Alternate names: gamma-CSF; gamma-trace; neuroendocrine basic polypeptide; post-gamma I
C.Species: Homo sapiens (man)
C.Date: 06-Jul-1982 #sequence revision 31-Mar-1991 #ext_change 08-Dec-2000
C.Accession: S10215; S00004; U10095; A33400; S02751; A01370; A25434; S12288; A32732; A605
R.Abrahamson, M.; Olafsson, I.; Paladocitr, A.; Ulvbaeck, M.; Lundwall, A.; Jensen, O.,
Biochem. J. 268, 287-294, 1990

A>Title: Structure and expression of the human cystatin C gene.
A/Reference number: S10216; MUID:90303202; PMID:2363674
A/Accession: S10216
A/Molecule type: DNA
A/Residues: 1-146 <AB1>
A/Cross-references: EMBL:X52255; NID:930257; PIDN:CAA6497.1; PID:g296643
R/Abrahamson, M.; Grubb, A.; Olafsson, I.; Lundvall, A.
FEBS Lett. 216, 229-233, 1987
A/Title: Molecular cloning and sequence analysis of cDNA coding for the precursor of the
A/Reference number: S00004; MUID:87219149; PMID:3495457
A/Accession: S00004
A/Molecule type: mRNA
A/Residues: 1-146 <AB2>
A/Cross-references: EMBL:X05607; NID:930371; PIDN:CAA2906.1; PID:g755738
R/Levy, E.; Lopez-Otin, C.; Ghiso, J.; Geltnier, D.; Frangione, B.
J. Exp. Med. 169, 1771-1778, 1989
A/Title: Stroke in Icelandic patients with hereditary amyloid angiopathy is related to a
A/Reference number: J10095; MUID:89235594; PMID:2541223
A/Accession: J10095
A/Molecule type: DNA
A/Residues: 1-146 <LEV>
A/Cross-references: GB:X61691; NID:930367; PIDN:CAA43856.2; PID:g4490944
A/Note: the cystatin C gene isolated from the brain of an Icelandic patient with heredit
e)
R/Saitoh, E.; Sabatini, L.M.; Eddy, R.L.; Shows, T.B.; Azen, E.A.; Isemura, S.; Sando,
Biochem. Biophys. Res. Commun. 162, 1324-1331, 1989
A/Title: The human cystatin C gene (CST3) is a member of the cystatin gene family which
A/Reference number: A33400; MUID:89350949; PMID:2764935
A/Accession: A33400
A/Molecule type: DNA
A/Residues: 1-24, 'T', 26-146 <SA1>
A/Cross-references: GB:M27889; GB:M27890; GB:M27891; NID:9181385; PIDN:AAA52164.1; PID:g
R/Ghiso, J.; Cowan, N.; Frangione, B.
Biol. Chem. Hoppe-Seyler 369, 205-208, 1988
A/Title: Isolation of a sequence encoding human cystatin C. Conservation of exon-intron
A/Reference number: S02751; MUID:89076507; PMID:3264504
A/Accession: S02751
A/Molecule type: DNA
A/Residues: 82-119 <GH2>
A/Cross-references: EMBL:M27769
A/Note: the authors translated the codon ACC for residue 105 as Thr, the sequence shown
R/Grubb, A.; Lofberg, H.
Proc. Natl. Acad. Sci. U.S.A. 79, 3024-3027, 1982
A/Title: Human gamma-trace, a basic microprotein: amino acid sequence and presence in th
A/Reference number: A01270; MUID:82222268; PMID:6283552
A/Accession: A01270
A/Molecule type: Protein
A/Residues: 27-131, 'S', 133-146 <GRU>
R/Chico, J.; Jensen, O.; Frangione, B.
Proc. Natl. Acad. Sci. U.S.A. 83, 2974-2978, 1986
A/Title: Amyloid fibrils in hereditary cerebral hemorrhage with amyloidosis of Iceland
A/Reference number: A25434; MUID:86206076; PMID:3517880
A/Accession: A25434
A/Molecule type: Protein
A/Residues: 37-93, 'Q', 95-146 <GHI>
R/Turk, V.; Brzin, J.; Longier, M.; Riconja, A.; Eropkin, M.; Borchart, U.; Machleidt, W.
Hoppe-Seyler's Z. Physiol. Chem. 364, 1487-1496, 1983
A/Title: Protein inhibitors of cysteine proteinases. III. Amino-acid sequence of cystati
A/Reference number: S01461; MUID:84110059; PMID:6662498
A/Accession: S12288
A/Molecule type: Protein
A/Residues: 27-73 <TUR>
R/Brzin, J.; Popovic, T.; Turk, V.
Biochem. Biophys. Res. Commun. 118, 103-109, 1984
A/Title: Human cystatin, a new protein inhibitor of cysteine proteinases.
A/Reference number: A32732; MUID:84128015; PMID:6365094
A/Accession: A32732
A/Molecule type: Protein
A/Residues: 27-76 <BRZ>
R/Olafsson, I.; Gudmundsson, G.; Abrahamson, M.; Jensen, O.; Grubb, A.
Scand. J. Clin. Lab. Invest. 50, 85-93, 1990
A/Title: The amino terminal portion of cerebrospinal fluid cystatin C in hereditary cyst
A/Reference number: A60552; MUID:90193615; PMID:2315647

A/Accession: A60552
A/Molecule type: protein
A/Residues: 27-49, 'XX', 52-64 <OLA>
A/Note: this protein, purified from cerebrospinal fluid of patients with the autosomal d
e defective gene is not present in CSF but is found instead in amyloid deposits
R/Popovic, T.; Brzin, J.; Riconja, A.; Turk, V.
Biol. Chem. Hoppe-Seyler 371, 575-580, 1990
A/Title: Different forms of human cystatin C.
A/Reference number: S10607; MUID:91025625; PMID:2222856
A/Accession: S10607
A/Molecule type: Protein
A/Residues: 27-53 <POP>
A/Experimental source: urine, kidney disease
A/Note: truncated forms with amino ends at positions 35 and 36 of the precursor were also
R/Grubb, A.; Lofberg, H.; Barrett, A.J.
FEBS Lett. 170, 370-374, 1984
A/Title: The disulphide bridges of human cystatin C (gamma-trace) and chicken cystatin.
A/Reference number: S01462
A/Contents: annotation; disulfide bonds
R/Bertl, P.J.; Storer, A.C.
Biochem. J. 302, 411-416, 1994
A/Title: Local pH-dependent conformational changes leading to proteolytic susceptibility
A/Reference number: S55305; MUID:94379969; PMID:8092991
A/Accession: S55305
A/Status: preliminary
A/Molecule type: protein
A/Residues: 27-49, 106-146 <BER>
A/Comment: This protein is found in the post-gamma-globulin fraction of cerebrospinal fl
e patients with certain autoimmune diseases.
C/Comment: This protein is an inhibitor of cysteine proteinases and may serve an importan
C/Comment: A mutant cystatin C, with 94-Gln, is deposited in hereditary cerebral hemorr
C/Genetics:
A/Gene: GDB:CST3
A/Cross-references: GDB:119817; OMIM:105150
A/Map position: 20p11.2-20p11.2
A/Introns: 81/3; 119/3
A/Keywords: amyloid; cysteine proteinase inhibitor; extracellular protein; hydroxyproline
F:1-26/Domain: signal sequence #status experimental <SIG>
F:27-146/Product: cystatin C #status experimental <MAV>
F:35-146/Domain: cystatin homology <CVS>
F:81-85/Region: inhibitory #status predicted
F:29/Modified site: hydroxyproline (Pro) (partial) #status experimental
F:99-109, 123-143/Disulfide bonds: #status experimental

Query Match 27.14; Score 90.5; DB 1; Length 146;
Best Local Similarity 35.84; Pred. No. 0.0012;
Matches 19; Conservative 10; Mismatches 21; Indels 3; Gaps 2;

QY 1 RQYTDHLEHYLHNPOMOTTQCK--PRTTNC-VFOERELHQNVCFSVFAPVPM 50
DB 80 KQIVAGNVPLDVELGRTTCTKQPNLNDPFDQPHLKRAKFCFQIVAPV 132

RESULT 6
A47142
cystatin D precursor - human
C/Species: Homo sapiens (man)
C/Date: 03-May-1994 #sequence
C/Accession: A47142; S18212
R/Freije, J.P.; Balbin, M.; Abrahamson, M.; Velasco, G.; Dalboe, H.; Grubb, A.; Lopez-Ot
J. Biol. Chem. 268, 15737-15744, 1993
A/Title: Human cystatin D. cDNA cloning, characterization of the *Bacterichia coli* expres
A/Reference number: A47142; MUID:93340179; PMID:8340398
A/Accession: A47142
A/Status: preliminary
A/Molecule type: mRNA
A/Residues: 1-142 <FRB>
A/Cross-references: GB:X70377; NID:9398710; PIDN:CAA49838.1; PID:g398711
A/Note: single residue difference between this report and S18218 was investigated and bnc
R/Freije, J.P.; Abrahamson, M.; Olafsson, I.; Velasco, G.; Grubb, A.; Lopez-Otin, C.
J. Biol. Chem. 266, 20538-20543, 1991
A/Title: Structure and expression of the gene encoding cystatin D, a novel human cysteine

A:Molecule type: protein
 A:Residues: 1-112 <HR>
 C:Superfamily: cystatin, cystatin homology
 C:Keywords: colostrum; cysteine proteinase inhibitor
 F/2-112/Domain: cystatin homology <CYS>
 F/48-52/Region: inhibitory #status predicted
 F/66-76,90-110/Disulfide bonds: #status predicted

Query Match 24.7%; Score 82.5; DB 1; Length 112;
 Best Local Similarity 30.0%; Pred. No. 0.0083;
 Matches 18; Conservative 12; Mismatches 27; Indels 3; Gaps 2;

Oy 1 ROYTDHLEHIANEMQWTCOKPEPT--NC-VPQERELHGVNCFSPVAVPMEQYKIL 57
 Db 47 KQVVGSMNYFLVDLKGRTCTCKSQANDSCFPNQHPLKSKLCSFOYVVPMMNTNTLV 106

RESULT 11

UDHUP1

Cystatin S precursor - human
 N/Alternate names: cystatin SA-III; salivary acidic protein-1

C/Species: Homo sapiens (man)

C/Date: 25-Feb-1985 #sequence, revision 08-Feb-1996 #text_change 16-Jul-1999

C/Accession: S17667; S16500; A01272; A29603; S19280; A56608

R/Bobek, L.A.; Aguirre, A.; Levine, M.J.

Biochem. J. 278, 627-635, 1991

A>Title: Human salivary cystatin S. Cloning, sequence analysis, hybridization in situ an

A/Reference number: S17667; MUID:91378918; PMID:1898352

A/Accession: S17667

A:Molecule type: mRNA

A:Residues: 1-141 <ROB>

A/Cross-references: EMBL:X54667; NID:g30365; PIDN:CAA8478.1; PID:g30366

R/Lamkin, M.S.; Jensen, U.L.; Setayesh, M.R.; Troxler, R.F.; Oppenheim, F.G.

Arch. Biochem. Biophys. 288, 664-670, 1991

A>Title: Salivary cystatin SA-III, a potential precursor of the acquired enamel pellicle

A/Reference number: S16500; MUID:91378515; PMID:1898055

A/Accession: S16500

A>Status: preliminary

A:Molecule type: protein

A:Residues: 21-134, 'D', 136-141 <IHU>

R/Isemura, S.; Saitoh, E.; Sanada, K.

J. Biochem. 96, 489-498, 1984

A>Title: Isolation and amino acid sequence of SP-1, an acidic protein of human whole sal

A/Reference number: A91985; MUID:85054716; PMID:6501254

A/Accession: A01272

A:Molecule type: protein

A:Residues: 29-134, 'D', 136-141 <ISB>

R/Isemura, S.; Saitoh, E.; Ito, S.; Isemura, M.; Sanada, K.

J. Biochem. 96, 1311-1314, 1984

A>Title: Cystatin S: a cysteine proteinase inhibitor of human saliva.

A/Reference number: A91981; MUID:85104877; PMID:6394600

A/Contents: annotation; inhibitor specificity

R/Hawke, D.H.; Yuan, P.M.; Wilson, K.J.; Hunkapiller, M.W.

Biochem. Biophys. Res. Commun. 145, 1248-1253, 1987

A>Title: Identification of a long form of cystatin from human saliva by rapid microbore

A/Reference number: A29603; MUID:87270697; PMID:3496880

A/Accession: A29603

A:Molecule type: protein

A:Residues: 21-51 <HAW>

R/Ramaubhu, N.; Reddy, M.S.; Bergey, E.J.; Haraszthy, G.G.; Soni, S.D.; Levine, M.J.

Biochem. J. 280, 341-352, 1991

A>Title: Large-scale purification and characterization of the major phosphoproteins and

A/Reference number: S19279; MUID:92082469; PMID:1747107

A/Accession: S19280

A:Molecule type: protein

A/Status: preliminary

A:Residues: 21-55 <RAM>

R/Johnson, M.; Richardson, C.F.; Bergey, E.J.; Levine, M.J.; Nancollas, G.H.

Arch. Oral Biol. 36, 631-636, 1991

A>Title: The effects of human salivary cystatins and atherin on hydroxyapatite crystal

A/Reference number: A56608; MUID:92074898; PMID:1741693

A/Accession: A56608

A:Molecule type: protein

A:Residues: 21-36 <JOH>
 A/Note: sequence extracted from NCBI backbone (NCBI:67866)
 C/Comment: This protein strongly inhibits papain and ficin, partially inhibits stem brom

A/Accession: A29632
 A:Molecule type: DNA
 A:Residues: 1-86, 'I', 88-141 <SAI>

R/Isemura, S.; Saitoh, E.; Sanada, K.

FEBS Lett. 198, 145-149, 1986

A>Title: Characterization of a new cysteine proteinase inhibitor of human saliva, cystat

A/Reference number: A01273; MUID:86164938; PMID:3514272

A/Accession: A01273

A:Molecule type: protein

A:Residues: 25-141 <ISB>

R/Ramaubhu, N.; Reddy, M.S.; Bergey, E.J.; Haraszthy, G.G.; Soni, S.D.; Levine, M.J.

Biochem. J. 280, 341-352, 1991

A>Title: Large-scale purification and characterization of the major phosphoproteins and

A/Reference number: S19279; MUID:92082469; PMID:1747107

A/Accession: S19279

A:Molecule type: protein

A:Residues: 21-55 <RAM>

C/Comment: Human saliva appears to contain several cysteine proteinase inhibitors that a

ences. Cystatin SN, with a pI of 7.5, is a much better inhibitor of papain and dipeptidyl

RESULT 12

UDHUP2

Cystatin SN precursor [validated] - human
 N/Alternate names: cystatin SA-I

C/Species: Homo sapiens (man)

C/Date: 28-May-1986 #sequence, revision 08-Feb-1996 #text_change 08-Dec-2000

C/Accession: A28110; S02489; A29632; A01273; S19279

R/Al-Hashimi, I.; Dickinson, D.P.; Levine, M.J.

J. Biol. Chem. 263, 9381-9387, 1988

A>Title: Purification, molecular cloning, and sequencing of salivary cystatin SA-I.

A/Reference number: A28110; MUID:88243825; PMID:2837486

A/Accession: A28110

A:Molecule type: mRNA

A:Residues: 1-141 <ALH>

A/Cross-references: GB:003870; NID:g337751; PIDN:AAA60299.1; PID:g337752

R/Saitoh, E.; Isemura, S.; Sanada, K.; Kim, H.S.; Smithies, O.; Maeda, N.

Biol. Chem. Hoppe-Seyler 369, 191-197, 1988

A>Title: Cystatin superfamily. Evidence that family II cystatin genes are evolutionarily

A/Reference number: S02489; MUID:89076505; PMID:3202964

A/Accession: S02489

A>Status: not compared with conceptual translation

A:Molecule type: DNA

A:Residues: 21-141 <SA2>

R/Saitoh, E.; Kim, H.S.; Smithies, O.; Maeda, N.

Gene 61, 329-338, 1987

A>Title: Human cysteine-proteinase inhibitors: nucleotide sequence analysis of three memt

A/Reference number: A91589; MUID:88185836; PMID:3446578

A/Accession: A29632

A:Molecule type: DNA

A:Residues: 1-86, 'I', 88-141 <SAI>

R/Isemura, S.; Saitoh, E.; Sanada, K.

FEBS Lett. 198, 145-149, 1986

A>Title: Characterization of a new cysteine proteinase inhibitor of human saliva, cystat

A/Reference number: A01273; MUID:86164938; PMID:3514272

A/Accession: A01273

A:Molecule type: protein

A:Residues: 25-141 <ISB>

R/Ramaubhu, N.; Reddy, M.S.; Bergey, E.J.; Haraszthy, G.G.; Soni, S.D.; Levine, M.J.

Biochem. J. 280, 341-352, 1991

A>Title: Large-scale purification and characterization of the major phosphoproteins and

A/Reference number: S19279; MUID:92082469; PMID:1747107

A/Accession: S19279

A:Molecule type: protein

A:Residues: 21-55 <RAM>

C/Comment: Human saliva appears to contain several cysteine proteinase inhibitors that a

ences. Cystatin SN, with a pI of 7.5, is a much better inhibitor of papain and dipeptidyl

C:Genetics:
 A:Gene: GDB:CST1
 A:Cross-references: GDB:119815; OMIM:123855
 A:Map position: 20p11.2-20p11.2
 A:Superfamily: cystatin homology
 C:Keywords: cysteine proteinase inhibitor; extracellular protein; saliva
 F:1-20/Domin: signal sequence #status predicted <SIG>
 F:21-141/Product: cystatin SA-1 #status experimental <MAT1>
 F:29-141/Product: cystatin SN #status experimental <MAT2>
 F:30-141/Domin: cystatin homology <CYS>
 F:76-80/Region: inhibitory #status predicted
 F:94-104.118-138/Diulfide bonds: #status predicted

Query Match 23.2%; Score 77.5; DB 1; Length 141;
 Best Local Similarity 34.0%; Pred. No. 0.041;
 Matches 18; Conservative 8; Mismatches 24; Indels 3; Gaps 2;

QY 1 RQVTDHLEHNLNEMQWTTQCK--PETTNCVPOER-ELHKQVNCFSVFAVPM 50
 Db 75 QQTVGVNVFPDVEVGRITCTKSQPNIDTCAFHQPDLQKOLCSFEIYEPW 127

RESULT 13
 JC2040
 cystatin - chum salmon
 N:Alternate names: cysteine proteinase inhibitor
 C:Species: Oncorhynchus keta (chum salmon)
 C:Date: 14-Jul-1994 #sequence_revision 14-Jul-1994 #text_change 16-Jul-1999
 C:Accession: J02040
 R:Koida, Y.; Noso, T.
 Biosci. Biotechnol. Biochem. 59, 164-169, 1994
 A:Title: The complete amino acid sequence of pluticary cystatin from chum salmon.
 A:Reference number: J02040; MUID:94162738; PMID:7764512
 A:Accession: J02040
 A:Molecule type: protein
 A:Residues: 1-111 <KO1>
 C:Comment: The intracellular role of this protein is the inhibition of intralysosomal pr
 C:Superfamily: cystatin; cystatin homology
 C:Keywords: cysteine proteinase inhibitor
 F:2-111/Domin: cystatin homology <CYS>
 F:48-52/Region: inhibitory
 F:89-109/Diulfide bonds: #status experimental

Query Match 21.6%; Score 72; DB 1; Length 111;
 Best Local Similarity 27.1%; Pred. No. 0.15;
 Matches 16; Conservative 14; Mismatches 27; Indels 2; Gaps 1;

QY 1 RQVTDHLEHNLNEMQWTTQCK--PETTNCVPOERELHKQVNCFSVFAVPMFQYKIL 57
 Db 47 KQVVGCMKTYFTVQMGRTPCRKGVERKICSHKDPQMAVPPKCTFEVMSIFMNSGIMKV 105

RESULT 14
 T23130
 hypothetical protein T28B8.4 - Caenorhabditis elegans
 C:Species: Caenorhabditis elegans
 C:Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 15-Sep-2000
 C:Accession: T23130; T25403
 R:White, S.
 submitted to the EMBL Data Library, December 1997
 A:Reference number: Z19690
 A:Accession: T23130
 A:Status: preliminary; translated from GB/EMBL/DBJ
 A:Molecule type: DNA
 A:Residues: 1-1779 <MIL>
 A:Cross-references: EMBL:AL021066; PIDN:CAAI5925.1; GSPDB:GN00019; CESP:T28B8.4
 A:Experimental source: clone H31B20
 R:White, S.
 submitted to the EMBL Data Library, October 1996
 A:Reference number: Z20029
 A:Accession: T23403
 A:Status: preliminary; translated from GB/EMBL/DBJ
 A:Molecule type: DNA

A:Residues: 1-1779 <M12>
 A:Cross-references: EMBL:Z61133; PIDN:CAB03445.1; GSPDB:GN00019; CESP:T28B8.4
 A:Experimental source: clone T28B8
 C:Genetics:
 A:Gene: CESP:T28B8.4
 A:Map position: 1
 A:Insertions: 161/2; 223/2; 309/3; 332/2; 547/3; 603/1; 657/3; 745/2; 802/1; 856/1; 1031/1;
 C:Superfamily: Caenorhabditis elegans hypothetical protein T28B8.3

Query Match 20.7%; Score 69; DB 2; Length 1779;
 Best Local Similarity 35.9%; Pred. No. 5.6;
 Matches 14; Conservative 8; Mismatches 7; Indels 10; Gaps 2;

QY 1 RQVTDHLEHNLNEMQWTTQCKPE---VTNCVPOERELHKQV-NCFSVFAVPMFQYK 31
 Db 749 RRTDHDYIINNLPTLKHPTNVQWIT--DPPRHCLPK 785

RESULT 15
 KGB012
 kininogen, LMW II precursor - bovine
 N:Alternate names: alpha-2-thiol proteinase inhibitor; preprokinogen
 N:Contains: bradykinin (kallidin); kininogen I; kininogen II; prokinogen
 C:Species: Bos primigenius taurus (cattle)
 C:Date: 14-Nov-1983 #sequence_revision 14-Nov-1983 #text_change 28-May-1999
 C:Accession: A01284
 R:Nawa, H.; Kitanura, N.; Hirose, T.; Asai, M.; Inayama, S.; Nakatsishi, S.
 Proc. Natl. Acad. Sci. U.S.A. 80, 90-94, 1983
 A:Title: Primary structures of bovine liver low molecular weight kininogen precursors and
 A:Reference number: A93984; MUID:83117859; PMID:6572010
 A:Accession: A01284
 A:Molecule type: mRNA
 A:Residues: 1-434 <NAM>
 A:Cross-references: GB:V00427; GB:J00011; NID:9489; PIDN:CAAZ3710.1; PID:9490
 C:Comment: The LMW kininogen precursor is produced from the same gene as the HMW form as
 C:Comment: Bradykinin, released from kininogen by kallikrein, is a potent vasodilator, ir
 C:Superfamily: kininogen; cystatin homology
 C:Keywords: alternative splicing; blood coagulation; cysteine proteinase inhibitor; glyco
 F:1-18/Domin: signal sequence #status predicted <SIG>
 F:19-434/Product: LMW kininogen II #status predicted <MAT>
 F:19-377/Product: LMW kininogen I heavy chain #status predicted <HCH>
 F:19-130/Domin: cystatin homology <CV1>
 F:141-252/Domin: cystatin homology <CV2>
 F:261-372/Domin: cystatin homology <CV3>
 F:377-386/Product: lysyl-bradykinin (kallidin II) #status predicted <KBDY>
 F:378-386/Product: bradykinin (kallidin I) #status predicted <BDY>
 F:387-434/Product: LMW kininogen I light chain #status experimental <LCH>
 F:19/Modified site: pyrrolidone carboxylic acid (Gln) (in mature form) #status predicted
 F:27-404,82-93,106-125,141-144,205-217,228-247,261-264,325-337,348-367/Diulfide bonds: #
 F:47,87,168,169,197,204,280/Binding site: carbohydrate (asn) (covalent) #status predicted
 F:376-377/Cleavage site: Met-Lys (kallikrein) #status predicted
 F:380/Modified site: 4-hydroxyproline (Pro) #status predicted
 F:386-387/Cleavage site: Arg-Ser (kallikrein) #status predicted

Query Match 20.5%; Score 68.5; DB 1; Length 434;
 Best Local Similarity 33.3%; Pred. No. 1.6;
 Matches 21; Conservative 11; Mismatches 22; Indels 9; Gaps 4;

QY 2 QVTDHLEHNLNEMQWTTQCKPE---VTNCVPOERELHKQV-NCFSVFAVPMFQYK 55
 Db 307 QVVGGLKYSIVFARETTCGKSNEELTKGC---EINIHQIILHCDANVVVPMEEKVPP 363

QY 56 ILN 58
 Db 364 TVN 366

Search completed: March 23, 2004, 17:14:32
 Job time : 11.8619 secs

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: March 23, 2004, 17:05:08 ; Search time 6.66527 Seconds
(without alignments)
460.917 Million cell updates/sec

Title: US-09-941-314-16
Perfect score: 334
Sequence: 1 RQVTDLEHYHNVEMQVTC.....NCFPSVPAVPMFQYKILNK 59

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 141681 seqs, 52070155 residues
Total number of hits satisfying chosen parameters: 141681

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : SwissProt_42.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match Length	ID	Description
1	334	100.0	137 1 CS11_HUMAN	Q9H112 homo sapien
2	204	61.1	139 1 CS11_MOUSE	Q94269 mus musculu
3	143.5	43.0	142 1 CST8_RAT	O88969 rattus norv
4	142.5	42.7	142 1 CST8_MOUSE	P22766 mus musculu
5	112.5	33.7	142 1 CST8_HUMAN	O60676 homo sapien
6	111	33.2	139 1 CSTL_HUMAN	Q9H114 gallus gall
7	99.5	29.8	139 1 CYT_CHICK	P01038 gallus gall
8	98.5	29.5	148 1 CYTC_RABIT	O97862 corycolagus
9	97.5	29.2	137 1 CYTC_RAT	P14841 rattus norv
10	93.5	28.0	146 1 CYTC_SAIISC	O19093 saimiri sci
11	92.5	27.7	116 1 CYT_GOTIA	P81061 colurnix co
12	90.5	27.1	146 1 CYTD_HUMAN	P01042 homo sapien
13	89.5	26.8	142 1 CYTD_HUMAN	P28335 homo sapien
14	89.5	26.8	146 1 CYTC_MACMU	O19092 macaca mula
15	88.5	26.5	140 1 CYTC_MOUSE	P21460 mus musculu
16	86.5	25.9	141 1 CYTT_HUMAN	P09228 homo sapien
17	86	25.7	145 1 CYTF_HUMAN	O76036 homo sapien
18	83.5	25.0	147 1 CST9_HUMAN	Q9H491 homo sapien
19	83	24.9	111 1 CYT_BITAR	P08935 bitis ariet
20	82.5	24.7	141 1 CYTS_HUMAN	P01035 homo sapien
21	82.5	24.7	148 1 CYTC_BOVIN	P01045 bos taurus
22	80	24.0	144 1 CYTF_MOUSE	O89098 mus musculu
23	77.5	23.2	141 1 CYTN_HUMAN	P01037 homo sapien
24	77	23.1	129 1 CYT_CYPCA	P35461 cyprinus ca
25	71.5	21.4	149 1 CYTM_HUMAN	Q15828 homo sapien
26	68.5	20.5	434 1 KNL2_BOVIN	P01047 bos taurus
27	68.5	20.5	619 1 KNL2_BOVIN	P01045 bos taurus
28	67.5	20.2	436 1 KNL1_BOVIN	P01044 bos taurus
29	67.5	20.2	621 1 KNL1_BOVIN	P01044 bos taurus
30	65.5	19.6	137 1 CST9_MOUSE	Q92016 mus musculu
31	65	19.6	137 1 CYT_ONCMY	Q91195 oncozychnu
32	64	19.2	130 1 CYT_ONCKE	Q98967 oncozychnu
33	63.5	19.0	644 1 KNG_HUMAN	P01042 homo sapien

34	63	18.9	141 1 CYTS_RAT	P19313 rattus norv
35	60	18.0	3411 1 POLG_YERVL	P03314 y genome po
36	60	18.0	3411 1 POLG_YERVL	P19901 y genome po
37	59	17.7	426 1 ETIR_RAT	P26894 rattus norv
38	58.5	17.5	625 1 T9S4_HUMAN	Q92544 homo sapien
39	57	17.1	39 1 YXX5_CABEL	Q18179 caenorhabdi
40	56	16.8	295 1 YDH2_XANAU	P22644 xanthobacte
41	56	16.8	427 1 ETIR_BOVIN	P21450 bos taurus
42	56	16.8	427 1 ETIR_HUMAN	P25101 homo sapien
43	56	16.8	427 1 ETIR_MOUSE	O61614 mus musculu
44	56	16.8	427 1 ETIR_PIG	Q29010 sus scrofa
45	55.5	16.6	938 1 V120_HSVJ7	P52438 human herpe

ALIGNMENTS

RESULT 1
ID CS11_HUMAN STANDARD; PRT; 137 AA.
AC Q9H112; Q9H113;
DT 28-FEB-2003 (Rel. 41, Created)
DT 28-FEB-2003 (Rel. 41, Last sequence update)
DT 28-FEB-2003 (Rel. 41, Last annotation update)
DE Cystatin 11 precursor.
GN CST11 OR CST8L.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.
OX NCBI_Taxid=9606;
RN [1]
RP SEQUENCE FROM N.A. (ISOPFORMS 1 AND 2).
RX MEDLINE=21638749; PubMed=11780052;
RA Deloukas P., Matthews L.H., Ashurst J., Burton J., Gilbert J.G.R.,
RA Jones M., Stavrides G., Almeida J.P., Babbage A.K., Bagguley C.L.,
RA Bailey J., Barlow K.F., Bates K.N., Beard L.M., Beare D.M.,
RA Beasley O.P., Bird C.P., Blakey S.E., Bridgman A.M., Brown A.J.,
RA Buck D., Burrill W.D., Butler A.P., Carder C., Carter N.P.,
RA Chapman J.C., Clamp M., Clark G., Clark L.N., Clark S.V., Clee C.M.,
RA Clegg S., Cobley V.E., Collier R.E., Connor R.E., Corby N.R.,
RA Coulson A., Coville G.J., Deadman R., Dhani P.D., Dunn M.,
RA Ellington A.G., Frankland J.A., Fraser A., French L., Garner P.,
RA Grafham D.V., Griffiths C., Griffiths M.N.D., Gwilliam R., Hall R.E.,
RA Hammond S., Harley J.L., Heath P.D., Ho S., Holden J.L., Howden P.J.,
RA Huckle E., Hunt A.R., Hunt S.B., Jekosch K., Johnson C.M., Johnson D.,
RA Kay M.P., Kimberley A.M., King A., Knights A., Laird G.K., Lawlor S.,
RA Lhvaeslahti M.H., Leverisha M.A., Lloyd C., Lloyd D.M., Lovell J.D.,
RA Marsh V.L., Martin S.L., McConachie L.J., McIay K., McNurray A.A.,
RA Milne S.A., Mistry D., Moore M.J.F., Mullikin J.C., Nickerson T.,
RA Oliver K., Parker A., Patel R., Pearce T.A.V., Peck A.I.,
RA Phillimore B.J.C.T., Prathalingam S.R., Plumb R.W., Ramsey H.,
RA Rice C.M., Rose M.T., Scott C.E., Sehra H.K., Showkeen R., Sims S.,
RA Skuce C.D., Smith M.L., Soderlund C., Steward C.A., Sulston J.E.,
RA Swann R.M., Symcote N., Taylor R., Tee L., Thomas D.W., Thorpe A.,
RA Tracey A., Tromans A.C., Vaudin M., Wall M., Wallis J.M.,
RA Whitehead S.L., Whitaker P., Willey D.L., Williams L., Williams S.A.,
RA Wilming L., Wray P.W., Hubbard T., Durbin R.M., Bentley D.R., Beck S.,
RA Rogers J.;
RL "The DNA sequence and comparative analysis of human chromosome 20.";
RL Nature 414:865-871(2001).
RL -1- SUBCELLULAR LOCATION: Secreted (Potential).
CC -1- ALTERNATIVE PRODUCTS:
CC Event=Alternative splicing; Named isoforms=2;
CC Name=1;
CC IsoId=Q9H112-1; Sequence=Displayed;
CC Name=2;
CC IsoId=Q9H112-2; Sequence=VSP_001260;
CC Note=No experimental confirmation available;
CC -1- SIMILARITY: Belongs to the cystatin family.
CC -----
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CC -----
DR EMBL; AL096677; CAC13170.1; -
DR EMBL; AL096677; CAC17423.1; -
DR HSSP; P01038; 1A90.
DR Genew; HGNC:15959; CST11.
DR InterPro; IPR000010; Cystatin.
DR Pfam; PF00031; cystatin; 1.
DR SMART; SM00043; CY; 1.
DR PROSITE; PS00287; CYSTATIN; FALSE_NEG.
KW Thiol protease inhibitor; Signal; Alternative splicing.
FT SIGNAL 1 25
FT CHAIN 1 25
FT SITE 26 137
FT DISULFID 75 79
FT DISULFID 93 101
FT CARBOHYD 114 134
FT VARSPLIC 131 131
FT 76 110
SQ SEQUENCE 137 AA; 16375 MW; C585C8C39A585C3B CRC64;
Query Match 100.0%; Score 334; DB 1; Length 137;
Best Local Similarity 100.0%; Pred. No. 2, 7e-34;
Matches 59; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 RQYTDHLEHIANEMQTTTCQKPEITNCVQERELHKQVNCPSVPAVPEQYKLNK 59
DB 74 RQYTDHLEHIANEMQTTTCQKPEITNCVQERELHKQVNCPSVPAVPEQYKLNK 132

RESULT 2

CS11_MOUSE STANDARD; PRT; 139 AA.

AC Q9D269;

DT 28-FEB-2003 (Rel. 41, Created)

DT 28-FEB-2003 (Rel. 41, Last sequence update)

DT 10-OCT-2003 (Rel. 42, Last annotation update)

DE Cystatin 11 precursor.

DE Cystatin 11 precursor.

OS Mus musculus (Mouse).

OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.

OX NCBI_TaxID=10090;

[1]

RP SEQUENCE FROM N.A.

RC STRAIN=C57BL/6J; TISSUE=Epididymis;

RX MEDLINE=21085660; PubMed=11217851;

RA Kawai J., Shimagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,

RA Arakawa T., Hara A., Fukunishi Y., Kono H., Adachi J., Fukuda S.,

RA Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamana K. I.,

RA Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,

RA Kadoya K., Matsuda H. A., Ashburner M., Batelov S., Casavant T.,

RA Fleischman W., Gaasterland T., Gissi C., King B., Kochava H.,

RA Kuehl P., Lewis S., Matsuo Y., Nikaide I., Pesole G., Quackenbush J.,

RA Schirml L. M., Saudubert F., Suzuki R., Tomita M., Wagner L., Washio T.,

RA Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barin G.,

RA Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M. F.,

RA Brownstein M. J., Bult C., Fletcher C., Fujita M., Gariboldi M.,

RA Guncionich S., Hill D., Hofmann M., Hume D. A., Kamita M., Lee N. H.,

RA Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,

RA Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,

RA Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K. F.,

RA Suzuki H., Toyokawa K., Wang K. H., Welter C., Whitaker C., Wilming L.,

RA Wyszawski B. A., Yoshida K., Hasegawa Y., Kawai H., Kohetsuki S.,

RA Hayashizaki Y.;

RT "Functional annotation of a full-length mouse cDNA collection.";

RL Nature 409:685-690(2001).

CC -1- SUBCELLULAR LOCATION: Secreted (Potential).

CC -1- SIMILARITY: Belongs to the cystatin family.

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CC -----
DR EMBL; AK020300; BAB32061.1; -
DR HSSP; P01034; 1G96.
DR MGD; MGI:1925490; Cst11.
DR InterPro; IPR000010; Cystatin.
DR Pfam; PF00031; cystatin; 1.
DR SMART; SM00043; CY; 1.
DR PROSITE; PS00287; CYSTATIN; FALSE_NEG.
KW Thiol protease inhibitor; Signal.
FT SIGNAL 1 28
FT CHAIN 1 28
FT SITE 29 139
FT DISULFID 76 80
FT DISULFID 94 102
FT CARBOHYD 115 135
FT 134 134
SQ SEQUENCE 139 AA; 16217 MW; F228D9815FA32640 CRC64;
Query Match 61.1%; Score 204; DB 1; Length 139;
Best Local Similarity 61.0%; Pred. No. 3, 1e-18;
Matches 36; Conservative 10; Mismatches 13; Indels 0; Gaps 0;

QY 1 RQYTDHLEHIANEMQTTTCQKPEITNCVQERELHKQVNCPSVPAVPEQYKLNK 59
DB 75 RQYTDHLEHIANEMQTTTCQKPEITNCVQERELHKQVNCPSVPAVPEQYKLNK 133

RESULT 3

CST8_RAT STANDARD; PRT; 142 AA.

AC O88969;

DT 30-MAY-2000 (Rel. 39, Created)

DT 30-MAY-2000 (Rel. 39, Last sequence update)

DT 10-OCT-2003 (Rel. 42, Last annotation update)

DE Cystatin-related epididymal spermatogenic protein precursor (Cystatin

DE 8).

OS Rattus norvegicus (Rat).

OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.

OX NCBI_TaxID=10116;

[1]

RP SEQUENCE FROM N.A.

RC STRAIN=Sprague-Dawley; TISSUE=Epididymis;

RX MEDLINE=99247899; PubMed=10229662;

RA Cornwall G. A., Hsia N., Sutton H. G.;

RT "Structure, alternative splicing and chromosomal localization of the

RL Biochem. J. 340:85-93(1999).

CC -1- FUNCTION: Performs a specialized role during sperm development and

CC maturation.

CC -1- SUBCELLULAR LOCATION: Secreted (By similarity).

CC -1- SIMILARITY: Belongs to the cystatin family.

CC -----

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DR EMBL; AF090692; AAC6317.1; -

DR HSSP; P01034; 1G96.

DR InterPro; IPR000010; Cystatin.

DR Pfam; PF00031; cystatin; 1.

DR SMART; SM00043; CY; 1.

KM Thiol protease inhibitor; signal.
 FT SIGNAL 1 19 POTENTIAL.
 FT CHAIN 20 142 CYSTATIN-RELATED EPIDIDYMAL SPERMATOGENIC
 FT SITE 77 81 PROTEIN.
 FT DISULFID 95 105 SECONDARY AREA OF CONTACT (POTENTIAL).
 FT DISULFID 119 139 BY SIMILARITY.
 FT CARBOHYD 100 100 BY SIMILARITY.
 SO SEQUENCE 142 AA; 16246 MW; PB873FPAAB6CAB34 CRC64; (POTENTIAL).
 Query Match 43.0%; Score 143.5; DB 1; Length 142;
 Best Local Similarity 41.0%; Pred. No. 9.2e-11;
 Matches 25; Conservative 19; Mismatches 14; Indels 3; Gaps 2;
 QY 2 QVTDHLEHYLANVEMQWTCQKP--ETNVCVPOER-ELHKVNCFFSVFANVPEQYKILN 58
 DB 77 QITDRMEYQIDVOISRSNCKRPLNTENCIPQKPKLEKLSCSFLVGLAPWNGEPDLS 136
 QY 59 K 59
 DB 137 K 137
 RESULT 4
 CST8_MOUSE STANDARD; PRT; 142 AA.
 ID CST8_MOUSE 089102;
 AC P32766; 089102;
 DT 01-OCT-1993 (Rel. 27, Created)
 DT 30-MAY-2000 (Rel. 39, Last sequence update)
 DT 28-FEB-2003 (Rel. 41, Last annotation update)
 DE Cystatin-related epididymal spermatogenic protein precursor (Cystatin-
 DE related epididymal specific protein) (Cystatin 8).
 GN CST8 OR CRES.
 OS Mus musculus (Mouse).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
 OX NCBI_TaxID=10090;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN=C3H, and CD-1;
 RX MEDLINE=99247899; PubMed=10229662;
 RA Cornwall G.A., Hsia N., Sutton H.G.;
 RT "Structure, alternative splicing and chromosomal localization of the
 RT cystatin-related epididymal spermatogenic gene";
 RL Biochem. J. 340:85-93(1999).
 [2]
 RP SEQUENCE OF 4-142 FROM N.A.
 RC TISSUE=Epididymis;
 RX MEDLINE=93078799; PubMed=1280328;
 RA Cornwall G.A., Orgebin-Crist M.-C., Hann S.R.;
 RT "The CRES gene: a unique testis-regulated gene related to the cystatin
 RT family is highly restricted in its expression to the proximal region
 RT of the mouse epididymis";
 RL Mol. Endocrinol. 6:1653-1664(1992).
 CC -1- FUNCTION: Performs a specialized role during sperm development and
 CC maturation.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- TISSUE SPECIFICITY: Proximal caput region of the epididymis. Lower
 CC expression in the testis. Within the testis it is localized to the
 CC elongating spermatids, whereas within the epididymis it is
 CC exclusively spermated by the proximal caput epididymis.
 CC -1- INDUCTION: Testicular factors or hormones other than androgens
 CC present in the testicular fluid may be involved in the regulation
 CC of CRES gene expression.
 CC -1- SIMILARITY: Belongs to the cystatin family.
 CC -----
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CC -----
 DR EMBL: AP091503; AAC61754.1; -
 DR EMBL: AP090691; AAC36316.1; -
 DR EMBL: S49926; AAC35390.1; -
 DR PIR: A45361; A45361.
 DR HSP: P01034; I096.
 DR MGI: MGI:107161; Cat8.
 DR InterPro: IPR000010; Cystatin.
 DR Pfam: PF00031; Cystatin; 1.
 DR SMART: SM00043; Cy; 1.
 KM Thiol protease inhibitor; signal.
 FT SIGNAL 1 19 POTENTIAL.
 FT CHAIN 20 142 CYSTATIN-RELATED EPIDIDYMAL SPERMATOGENIC
 FT SITE 77 81 PROTEIN.
 FT DISULFID 95 105 SECONDARY AREA OF CONTACT (POTENTIAL).
 FT DISULFID 119 139 BY SIMILARITY.
 FT CARBOHYD 100 100 BY SIMILARITY.
 FT CARBOHYD 100 100 N-LINKED (GLCNAC...) (POTENTIAL).
 FT CONFLICT 4 15 P1WLSLFLTP -> GTRBOVGEOSK (IN REF. 2).
 SO SEQUENCE 142 AA; 16288 MW; 50B446B98F6673E CRC64;
 Query Match 42.7%; Score 142.5; DB 1; Length 142;
 Best Local Similarity 41.0%; Pred. No. 1.2e-10;
 Matches 25; Conservative 19; Mismatches 14; Indels 3; Gaps 2;
 QY 2 QVTDHLEHYLANVEMQWTCQKP--ETNVCVPOER-ELHKVNCFFSVFANVPEQYKILN 58
 DB 77 QITDRMEYQIDVOISRSNCKRPLNTENCIPQKPKLEKLSCSFLVGLAPWNGEPDLS 136
 QY 59 K 59
 DB 137 K 137
 RESULT 5
 CST8_HUMAN STANDARD; PRT; 142 AA.
 ID CST8_HUMAN 060676;
 AC O60676;
 DT 30-MAY-2000 (Rel. 39, Created)
 DT 30-MAY-2000 (Rel. 39, Last sequence update)
 DT 28-FEB-2003 (Rel. 41, Last annotation update)
 DE Cystatin-related epididymal spermatogenic protein precursor (Cystatin
 DE related epididymal specific protein) (Cystatin 8).
 GN CST8 OR CRES.
 OS Homo sapiens (Human).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Primates; Catarrhini; Homiidae; Homo.
 OX NCBI_TaxID=9606;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Testis;
 RX MEDLINE=95344753; PubMed=7619504;
 RA Cornwall G.A., Hann S.R.;
 RT "Transient appearance of CRES protein during spermatogenesis and
 RT caput epididymal sperm maturation";
 RL Mol. Reprod. Dev. 41:37-46(1995).
 [2]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=21638749; PubMed=11780052;
 RA Deloukas P., Matthews L.H., Ashurst J., Burton J., Gilbert J.G.R.,
 RA Jones M., Stavrides G., Almeida J.P., Babbage A.K., Bagguley C.L.,
 RA Bailey J., Barlow K.F., Bates K.N., Beard L.M., Beare D.M.,
 RA Beasley O.P., Bird C.P., Blakey S.B., Bridgeman A.M., Brown A.J.,
 RA Buck D., Burrill W.D., Butler A.P., Carder C., Carter N.P.,
 RA Chapman J.C., Clamp M., Clark G., Clark L.N., Clark S.Y., Clee C.M.,
 RA Clegg S., Cobley V.E., Collier R.E., Connor R.E., Corby N.R.,
 RA Coulson A., Coville G.J., Deadman R., Dhani P.D., Dunn M.,
 RA Ellington A.G., Frankland J.A., Fraser A., French L., Garner P.,
 RA Griffiths D.V., Griffiths C., Griffiths M.N.D., Gwilliam R., Hall R.E.,
 RA Hammond S., Harley J.L., Heath P.D., Ho S., Holden J.L., Howden P.J.,
 RA Huckle E., Hunt A.R., Hunt S.E., Jekosch K., Johnson C.M., Johnson D.,
 RA Kay M.P., Kimberley A.M., King A., Knights A., Laird G.K., Lawlor S.,

RA Lohvasialho M.H., Leyerha M.A., Lloyd C., Lloyd D.M., Lovell J.D.,
 RA Marsh V.L., Martin S.L., McConachie L.J., McMay K., McMurray A.A.,
 RA Meline S.A., Mistry D., Moore M.J.F., Mullikin J.C., Nickerson T.,
 RA Oliver K., Parker A., Patel R., Pearce T.A.V., Peck A.I.,
 RA Phillimore B.J.C.T., Prathalingam S.R., Plumb R.W., Ramsay H.,
 RA Rice C.M., Rose M.T., Scott C.E., Sehra H.K., Shownkeen R., Sims S.,
 RA Skuce C.D., Smith M.L., Soderlund C., Steward C.A., Suleston J.E.,
 RA Swann R.M., Symamore N., Taylor R., Tee L., Thomas D.W., Thorpe A.,
 RA Tracey A., Tromans A.C., Vaudin M., Wall M., Wallis J.M., Williams S.A.,
 RA Whitehead S.L., Whitaker P., Willey D.L., Williams L., Williams S.A.,
 RA Wilming L., Wray P.W., Hubbard T., Durbin R.M., Bentley D.R., Beck S.,
 RA Rogers J.;
 RT "The DNA sequence and comparative analysis of human chromosome 20.";
 RL Nature 414:865-871(2001).
 CC -1- FUNCTION: Performs a specialized role during sperm development and
 CC maturation.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- TISSUE SPECIFICITY: Proximal caput region of the epididymis. Lower
 CC expression in the testis. Within the testis it is localized to the
 CC elongating spermatids, whereas within the epididymis it is
 CC exclusively synthesized by the proximal caput epithelium.
 CC -1- SIMILARITY: Belongs to the cystatin family.
 CC -----
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 CC -----
 CC EMBL: AF059244; AAC14707.1; -;
 CC EMBL: AL109954; CAB64234.1; -;
 CC HSSP: P01034; 1G96.
 DR GeneW: HGNC:2480; CST8.
 DR GO: GO:0004689; F:cysteine protease inhibitor activity; TAS.
 DR InterPro: IPR000010; Cystatin.
 DR Pfam: PF00031; cystatin; 1.
 DR SMART: SM00043; CY; 1.
 KW Thiol protease inhibitor; Signal; Polymorphism.
 FT SIGNAL 1 21
 FT CHAIN 22 142
 FT SITE 77 81
 FT DISULFID 95 105
 FT DISULFID 119 139
 FT CARBOHYD 27 27
 FT CARBOHYD 39 39
 FT VARIANT 142 142
 FT SEQUENCE 142 AA; 16275 MW; 9A351275E0F4E0D CRC64;
 SQ
 Query Match 33.7%; Score 112.5; DB 1; Length 142;
 Best Local Similarity 39.3%; Pred. No. 6.2e-07;
 Matches 24; Conservative 17; Mismatches 17; Indels 3; Gaps 2;
 QY 2 QVTDHLEHYHLNEMQWTTQCKPPTTN--CVPOER-ELHKVQNCFFSFAVWPQYKIIN 58
 DB 77 QVTDHLEHYHLNEMQWTTQCKPPTTN--CVPOER-ELHKVQNCFFSFAVWPQYKIIN 136
 QY 59 K 59
 DB 137 K 137
 RESULT 6
 CSTL HUMAN STANDARD; PRT; 165 AA.
 AC 09H14;
 DT 28-FEB-2003 (Rel. 41, Created)
 DT 28-FEB-2003 (Rel. 41, Last sequence update)
 DT 28-FEB-2003 (Rel. 41, Last annotation update)
 DE Cystatin-like 1 precursor.

GN CSTL.
 OS Homo sapiens (Human).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.
 NC NCBI_TaxID=9606;
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=21638749; PubMed=11780052;
 RA Deloukas P., Matthews L.H., Ashurst J., Burton J., Gilbert J.G.R.,
 RA Jones M., Stavrides G., Almeida J.P., Babbage A.K., Bagguley C.L.,
 RA Bailey J., Barlow K.F., Bates K.N., Beard L.M., Beare D.M.,
 RA Beasley O.P., Bird C.P., Blakey S.E., Bridgeman A.M., Brown A.J.,
 RA Buck D., Burrill W.D., Butler A.P., Carder C., Carter N.P.,
 RA Chapman J.C., Clamp M., Clark G., Clark L.N., Clark S.Y., Clee C.M.,
 RA Clegg S., Cobley V.E., Collier R.R., Connor R.E., Corby N.R.,
 RA Coulson A., Coville G.J., Deadman R., Dhami P.D., Dunn M.,
 RA Ellington A.G., Frankland J.A., Fraser A., French L., Garner P.,
 RA Graffham D.V., Griffiths M.N.D., Gwilliam R., Hall R.E.,
 RA Hammond S., Harley J.L., Heath P.D., Ho S., Holden J.L., Howden P.J.,
 RA Huckle E., Hunt A.R., Hunt S.E., Jekosch K., Johnson C.M., Johnson D.,
 RA Kay M.P., Kimberley A.M., King A., Knights A., Laird G.K., Lawlor S.,
 RA Lohvasialho M.H., Leyerha M.A., Lloyd C., Lloyd D.M., Lovell J.D.,
 RA Marsh V.L., Martin S.L., McConachie L.J., McMay K., McMurray A.A.,
 RA Meline S.A., Mistry D., Moore M.J.F., Mullikin J.C., Nickerson T.,
 RA Oliver K., Parker A., Patel R., Pearce T.A.V., Peck A.I.,
 RA Phillimore B.J.C.T., Prathalingam S.R., Plumb R.W., Ramsay H.,
 RA Rice C.M., Rose M.T., Scott C.E., Sehra H.K., Shownkeen R., Sims S.,
 RA Skuce C.D., Smith M.L., Soderlund C., Steward C.A., Suleston J.E.,
 RA Swann R.M., Symamore N., Taylor R., Tee L., Thomas D.W., Thorpe A.,
 RA Tracey A., Tromans A.C., Vaudin M., Wall M., Wallis J.M., Williams S.A.,
 RA Whitehead S.L., Whitaker P., Willey D.L., Williams L., Williams S.A.,
 RA Wilming L., Wray P.W., Hubbard T., Durbin R.M., Bentley D.R., Beck S.,
 RA Rogers J.;
 RT "The DNA sequence and comparative analysis of human chromosome 20.";
 RL Nature 414:865-871(2001).
 CC -1- SUBCELLULAR LOCATION: Secreted (Potential).
 CC -1- SIMILARITY: Belongs to the cystatin family.
 CC -----
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 CC -----
 CC EMBL: AL096677; CAC03440.2; -;
 CC HSSP: P01038; 1A90.
 DR GeneW: HGNC:15958; CSTL1.
 DR InterPro: IPR000010; Cystatin.
 DR PROSITE: PS00287; CYSTATIN; FALSE_NEG.
 KW Thiol protease inhibitor; Signal.
 FT SIGNAL 1 19
 FT CHAIN 20 165
 FT SITE 93 97
 FT DISULFID 111 121
 FT DISULFID 134 154
 FT CARBOHYD 42 42
 FT CARBOHYD 54 54
 FT CARBOHYD 57 57
 FT CARBOHYD 86 86
 FT CARBOHYD 114 114
 FT CARBOHYD 118 118
 FT CARBOHYD 151 151
 FT SEQUENCE 165 AA; 19312 MW; 9D66D685875DA6BA CRC64;
 SQ
 Query Match 33.2%; Score 111; DB 1; Length 165;
 Best Local Similarity 31.7%; Pred. No. 1.1e-06;
 Matches 19; Conservative 18; Mismatches 21; Indels 2; Gaps 1;
 QY 1 RQVTDHLEHYHLNEMQWTTQCKPPTTN--CVPOER-ELHKVQNCFFSFAVWPQYKIIN 58
 DB 92 RQVTDHLEHYHLNEMQWTTQCKPPTTN--CVPOER-ELHKVQNCFFSFAVWPQYKIIN 151


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RC STRAIN=Japanese white; TISSUE=Bone;
RX MEDLINE=98424349; PubMed=9753427;
RA Kobori M., Ikeda Y., Nara H., Kato M., Kamegawa M., Nojima H.,
RT "Large scale isolation of osteoclast-specific genes by an improved
RL method involving the preparation of a subtracted cDNA library.";
CC Gene Cells 3:459-475(1998).
CC -1- FUNCTION: This is a thiol proteinase inhibitor.
CC -1- SIMILARITY: Belongs to the cystatin family.
-----
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CC
CC EMBL; AB009342; BAA75921.1; -.
CC HSSP; P01034; I996.
CC InterPro: IPR000010; Cystatin.
CC Pfam; PF00031; cystatin; 1.
CC SMART; SM00043; Cy, 1.
CC PROSITE; PS00287; CYSTATIN; FALSE_NEG.
CC Thiol protease inhibitor; Signal.
CC SIGNAL 1 28 POTENTIAL.
CC CHAIN 29 148 CYSTATIN C.
CC ACT SITE 39 39 REACTIVE SITE.
CC SITE 83 87 SECONDARY AREA OF CONTACT.
CC DISULFID 101 111 BY SIMILARITY.
CC DISULFID 125 145 BY SIMILARITY.
CC SEQUENCE 148 AA; 16346 MW; 1523C8311695B9A CRC64;

Query Match 29.5%; Score 98.5; DB 1; Length 148;
Best Local Similarity 31.7%; Pred. No. 3.4e-05;
Matches 19; Conservative 11; Mismatches 21; Indels 3; Gaps 2;

Qy 1 RQVTDHLEHLYNEMQWTCQKPE--TNC-VQERLHKQVNCFSVFAVPMFEQYKIL 57
Db 82 RQIVSGVKYLDVLIGRTTCKTQTNLANCFPHQDPLQKMLCSFELYSVPMKXSL 141

RESULT 9
CYTC_RAT STANDARD; PRT; 127 AA.
AC PI4841;
DT 01-APR-1990 (Rel. 14, Created)
DT 01-APR-1990 (Rel. 14, Last sequence update)
DT 28-FEB-2003 (Rel. 41, Last annotation update)
DE Cystatin C precursor (Fragment).
GN CST3.
OS Rattus norvegicus (Rat).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
OX NCBI_TaxID=10116;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=Buffalo;
RX MEDLINE=90092122; PubMed=2689174;
RA Cole T., Dickson P.W., Esnard F., Averill F., Risbridger G.,
RT Gauthier F., Schreiber G.;
RT "The cDNA structure and expression analysis of the genes for the
RT cysteine proteinase inhibitor cystatin C and for beta 2-microglobulin
RT in rat brain.";
RL Eur. J. Biochem. 186:35-42(1989).
RN [2]
RP SEQUENCE OF 8-127.
RX MEDLINE=90380276; PubMed=2400577;
RA Esnard F., Esnard A., Faucher D., Capony J.-P., Derancourt J.,
RT Billard M., Gauthier F.;
RT "Rat cystatin C: the complete amino acid sequence reveals a site for
RT N-glycosylation.";
RL Biol. Chem. Hoppe-Seyler 371:161-166(1990).

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RN [3]
RP SEQUENCE OF 8-49.
RX MEDLINE=88313020; PubMed=3044831;
RA Esnard A., Esnard F., Faucher D., Gauthier F.;
RT "Two rat homologues of human cystatin C.";
RL FEBS Lett. 236:475-478(1988).
RN [4]
RP SEQUENCE OF 8-20.
RX TISSUE=Sertoli cells;
RC MEDLINE=9225121; PubMed=1563513;
RA Esnard A., Esnard F., Guillou F., Gauthier F.;
RT "Production of the cysteine proteinase inhibitor cystatin C by rat
RT Sertoli cells.";
RL FEBS Lett. 300:131-135(1992).
CC -1- FUNCTION: As an inhibitor of cysteine proteinases, this protein is
CC thought to serve an important physiological role as a local
CC regulator of this enzyme activity. Known to inhibit cathepsin B,
CC H, and L.
CC -1- SIMILARITY: Belongs to the cystatin family.
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CC
CC EMBL; X16957; CAA34831.1; -.
CC PIR; S07085; S07085.
CC PIR; S10587; S10587.
CC HSSP; P01034; I996.
CC InterPro: IPR000010; Cystatin.
CC Pfam; PF00031; cystatin; 1.
CC SMART; SM00043; Cy, 1.
CC PROSITE; PS00287; CYSTATIN; 1.
CC Thiol protease inhibitor; Signal.
CC NON TER 1 1
CC SIGNAL <1 7
CC CHAIN 8 127 CYSTATIN C.
CC ACT SITE 18 18 REACTIVE SITE.
CC SITE 62 66 SECONDARY AREA OF CONTACT.
CC DISULFID 80 90 BY SIMILARITY.
CC DISULFID 104 124 BY SIMILARITY.
CC CONFLICT 25 25 A -> E (IN REF. 2).
CC SEQUENCE 127 AA; 14039 MW; 78F70158B7925853 CRC64;

Query Match 29.2%; Score 97.5; DB 1; Length 127;
Best Local Similarity 37.7%; Pred. No. 3.9e-05;
Matches 20; Conservative 12; Mismatches 18; Indels 3; Gaps 2;

Qy 1 RQVTDHLEHLYNEMQWTCQKPE--TNC-VQERLHKQVNCFSVFAVPM 50
Db 61 RQIVAGINYYLDVEMGRTTCKSQTNLANCFPHQDPLMKALCSFQIVSPV 113

RESULT 10
CYTC_SAISC STANDARD; PRT; 146 AA.
AC 019093;
DT 15-JUL-1998 (Rel. 36, Created)
DT 15-JUL-1998 (Rel. 36, Last sequence update)
DT 28-FEB-2003 (Rel. 41, Last annotation update)
DE Cystatin C precursor.
GN CST3.
OS Saimiri sciureus (Common squirrel monkey).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Platyrrhini; Cebidae; Saimiri.
OX NCBI_TaxID=9521;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=97054523; PubMed=8898820;
RA Wei L.H., Walker L.C., Levy E.;

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RT "Cystatin C. Icelandic-like mutation in an animal model of
 RT cerebrovascular beta-amyloidosis.";
 RL Stroke 27:2080-2085(1996).
 CC -1- FUNCTION: As an inhibitor of cysteine proteinases, this protein is
 CC thought to serve an important physiological role as a local
 CC regulator of this enzyme activity.
 CC -1- SIMILARITY: Belongs to the cystatin family.
 CC -----
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 CC -----
 DR EMBL; U52028; AAB64051.1; -;
 DR HSSP; P01034; I966.
 DR InterPro; IPR000010; Cystatin.
 DR Pfam; PF00031; cystatin; 1.
 DR SMART; SM00043; CY 1.
 DR PROSITE; PS00287; CYSTATIN; 1.
 DR Thiol protease inhibitor; Amyloid; Signal.
 FT SIGNAL 1 26
 FT CHAIN 27 146
 FT ACT SITE 37 37
 FT SITE 81 85
 FT DISULFID 99 109
 FT DISULFID 123 143
 SQ SEQUENCE 146 AA; 15946 MW; 081963530306AA3 CRC64;
 Query Match 28.0%; Score 93.5; DB 1; Length 146;
 Best Local Similarity 37.7%; Pred. No. 0.00014;
 Matches 20; Conservative 10; Mismatches 20; Indels 3; Gaps 2;
 Oy 1 ROYTDHLEHYHLYNEMOWTTCOK--PETTNCVPOER-ELHKQVNCFSVFAVPMV 50
 Db 80 KOIVAGNYFLDYEMGRTTCTKQNPNDNCFHEQPHLKKAKCSFOIYSVPM 132
 ID _CYT_COTJA STANDARD; PRT; 116 AA.
 AC P01034;
 DT 15-JUL-1998 (Rel. 36, Created)
 DT 15-JUL-1998 (Rel. 36, Last sequence update)
 DT 28-FEB-2003 (Rel. 41, Last annotation update)
 DB Cystatin (Bgg-white cystatin).
 OS Coturnix coturnix japonica (Japanese quail).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
 OC Coturnix.
 NCBI_TaxID=93934;
 RP SEQUENCE.
 RC TISSUE=Bgg white; PubMed=9276465;
 RX MEDLINE=97420480; PubMed=9276465;
 RA Gerhartz B., Engh R.A., Mentle R., Eckerskorn C., Torquato R.,
 RA Witten J., Kolb H.J., Machleidt W., Fritz H., Auerwald B.A.;
 RT "Quail cystatin: isolation and characterisation of a new member of
 RT the cystatin family and its hypothetical interaction with cathepsin
 RT B.";
 RL FEBS Lett. 412:551-556(1997).
 CC -1- FUNCTION: This protein binds tightly to and inhibits papain and
 CC cathepsin B.
 CC -1- SIMILARITY: Belongs to the cystatin family.
 DR HSSP; P01034; ICEW.
 DR InterPro; IPR000010; Cystatin.
 DR Pfam; PF00031; cystatin; 1.
 DR SMART; SM00043; CY 1.
 DR PROSITE; PS00287; CYSTATIN; 1.
 KM Thiol protease inhibitor; Phosphorylation.
 FT ACT_SITE 9 9
 FT REACTIVE SITE.

FT SITE 53 57 SECONDARY AREA OF CONTACT.
 FT DISULFID 71 81
 FT DISULFID 95 115
 FT MOD_RES 80 80
 SQ SEQUENCE 116 AA; 13093 MW; 48248621053A2F70 CRC64;
 Query Match 27.7%; Score 92.5; DB 1; Length 116;
 Best Local Similarity 33.3%; Pred. No. 0.00015;
 Matches 20; Conservative 13; Mismatches 24; Indels 3; Gaps 2;
 Oy 1 ROYTDHLEHYHLYNEMOWTTCOK--PETTNCVPOERELHKQVNCFSVFAVPMFQYKIL 57
 Db 52 QQLVSGIKYIMYBIEGRTTTPKSSADLQSCFPHDEPMAYTTCNFVYSIPMLNQKIL 111
 ID CYTC_HUMAN STANDARD; PRT; 146 AA.
 AC P01034;
 DT 21-JUL-1986 (Rel. 01, Created)
 DT 01-AUG-1988 (Rel. 08, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Cystatin C precursor (Neuroendocrine basic polypeptide) (Gamma-trace)
 DE (Post-gamma-globulin).
 GN CST3.
 OS Homo sapiens (human).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Primates; Catarrhini; Homiidae; Homo.
 NCBI_TaxID=9606;
 RP SEQUENCE FROM N.A.
 RC TISSUE=Placenta;
 RX MEDLINE=87219149; PubMed=3495457;
 RA Abrahamson M., Grubb A., Olafsson I., Lundwall A.;
 RT "Molecular cloning and sequence analysis of cDNA coding for the
 RT precursor of the human cysteine proteinase inhibitor cystatin C.";
 RL FEBS Lett. 216:229-233(1987).
 RN [2]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Leukocyte;
 RX MEDLINE=90303202; PubMed=2363674;
 RA Abrahamson M., Olafsson I., Paladocit A., Ulvback M., Lundwall A.,
 RA Jensen O., Grubb A.;
 RT "Structure and expression of the human cystatin C gene.";
 RL Biochem. J. 268:287-294(1990).
 RN [3]
 RP SEQUENCE FROM N.A. (HCHWA VARIANT).
 RC TISSUE=Brain;
 RX MEDLINE=89235594; PubMed=2541223;
 RA Levy B., Lopez-Otin C., Ghiso J., Gellner D., Frangione B.;
 RT "Stroke in Icelandic patients with hereditary amyloid angiopathy is
 RT related to a mutation in the cystatin C gene, an inhibitor of
 RT cysteine proteases.";
 RL J. Exp. Med. 169:1771-1778(1989).
 RN [4]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=89350949; PubMed=2764935;
 RA Saitoh E., Sabatini L.M., Eddy R.L., Shows T.B., Azen B.A.,
 RA Isemura S., Sanada K.;
 RT "The human cystatin C gene (CST3) is a member of the cystatin gene
 RT family which is localized on chromosome 20.";
 RL Biochem. Biophys. Res. Commun. 162:1324-1331(1989).
 RN [5]
 RP SEQUENCE FROM N.A.
 RA Dickinson D.P., Hewett-Emmett D., Thiesse M.;
 RT "Acquisition of complex patterns of differential expression in
 RT epithelial cell populations during the evolution of type 2 cystatin
 RT genes.";
 RL Submitted (NOV-2000) to the EMBL/GenBank/DBJ databases.
 RN [6]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=21638749; PubMed=11780052;
 RA Deloukas P., Matthews L.H., Ashurst J., Burton J., Gilbert J.G.R.,

RA Jones M., Stavrides G., Almeida J.P., Babbage A.K., Bagguley C.L.,
 RA Bailey J., Barlow K.F., Bates K.N., Beard L.M., Beare D.M.,
 RA Beasley O.P., Bird C.P., Blakey S.E., Bridgeman A.M., Brown A.J.,
 RA Buck D., Burrill W.D., Butler A.P., Carder C., Carter N.P.,
 RA Clegg S., Cobley V.E., Collier R.E., Connor R.E., Corby N.R.,
 RA Coulson A., Coville G.J., Deadman R., Dhani P.D., Dunn M.,
 RA Ellington A.G., Frankland J.A., Fraser A., French L., Garner P.,
 RA Grafham D.V., Griffiths C., Griffiths M.N.D., Gwilliam R., Hall R.E.,
 RA Hammond S., Harley J.L., Heath P.D., Ho S., Holden J.L., Howden P.J.,
 RA Huckle E., Hunt A.R., Hunt S.E., Jekosch K., Johnson C.M., Johnson D.,
 RA Kay M.P., Kimberley A.M., King A., Knights A., Laird G.K., Lawlor S.,
 RA Lehesvallo M.H., Leverhwa M.A., Lloyd C., Lloyd D.M., Lovell J.D.,
 RA Marsh V.L., Martin S.L., McConachie L.J., McIlroy K., Murray A.A.,
 RA Milne S.A., Mistry D., Moore M.J.F., Mullikin J.C., Nickerson T.,
 RA Oliver K., Parker A., Patel R., Pearce T.A.V., Peck A.I.,
 RA Phillimore B.J.C.T., Prathalingam S.R., Plumb R.W., Ramay H.,
 RA Rice C.M., Rose M.T., Scott C.E., Sehra H.K., Showkeen R., Sims S.,
 RA Skuce C.D., Smith M.L., Soderlund C., Steward C.A., Suleston J.E.,
 RA Span R.M., Symcote N., Taylor R., Tee L., Thomas D.W., Thorpe A.,
 RA Tracey A., Tromans A.C., Vaudin R., Wall M., Wallis J.M.,
 RA Whitehead S.L., Whitaker P., Willey D.L., Williams L., Williams S.A.,
 RA Wilming L., Wray P.W., Hubbard T., Durbin R.M., Bentley D.R., Beck S.,
 RA Rogers J.,
 RT "The DNA sequence and comparative analysis of human chromosome 20.",
 RL Nature 414:865-871(2001).
 [7]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Brain;
 RX MEDLINE=22388257; PubMed=12477932;
 RA Strausberg R.L., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
 RA Krausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
 RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
 RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
 RA Diatchenko L., Marsina K., Farmer A.A., Rubin G.M., Hong L.,
 RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
 RA Brownstein M.J., Udell T.B., Toshimaki S., Carninci P., Prange C.,
 RA Raha S.S., Loguailano N.A., Peters G.J., Abramson R.D., Mullah S.J.,
 RA Bosak S.A., McKernan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
 RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
 RA Villalón D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
 RA Fahy J., Hailton E., Kettman M., Madan A., Rodriguez M.C., Sanchez A.,
 RA Whitting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
 RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
 RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
 RA Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smalins D.E.,
 RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.,
 RT "Generation and initial analysis of more than 15,000 full-length
 human and mouse cDNA sequences.";
 RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
 [8]
 RP SEQUENCE OF 27-146.
 RX MEDLINE=82222268; PubMed=6283552;
 RA Grubb A., Loeffberg H.,
 RT "Human gamma-trace, a basic microprotein: amino acid sequence and
 presence in the adenohypophysis.";
 RL Proc. Natl. Acad. Sci. U.S.A. 79:3024-3027(1982).
 [9]
 RP SEQUENCE OF 27-73.
 RX MEDLINE=84110059; PubMed=6662498;
 RA Turk V., Brzin J., Longner M., Ritonja A., Eropkin M., Borchart U.,
 RA Machleidt W.,
 RT "Protein inhibitors of cysteine proteinases. III. Amino-acid sequence
 of cystatin from chicken egg white.";
 RL Hoppe-Seyler's Z. Physiol. Chem. 364:1487-1496(1983).
 [10]
 RP SEQUENCE OF 27-76.
 RX MEDLINE=84128015; PubMed=6365094;
 RA Brzin J., Popovic T., Turk V.,
 RT "Human cystatin, a new protein inhibitor of cysteine proteinases.";
 RL Biochem. Biophys. Res. Commun. 118:103-109(1984).
 [11]
 RP DISULFIDE BONDS.

RA Grubb A., Loeffberg H., Barrelet A.J.,
 RT "The disulfide bridges of human cystatin C (gamma-trace) and chicken
 cystatin.";
 RL FEBS Lett. 170:370-374(1984).
 [12]
 RP X-RAY CRYSTALLOGRAPHY (2.50 ANGSTROMS) OF 27-146.
 RX MEDLINE=21173909; PubMed=11276250;
 RA Janowski R., Kozak M., Jankowska E., Grzonka Z., Grubb A.,
 RA Abrahamson M., Jaskolski M.,
 RT "Human cystatin C, an amyloidogenic protein, dimerizes through
 three-dimensional domain swapping.";
 RL Nat. Struct. Biol. 8:316-320(2001).
 [13]
 RP VARIANT GLN-94.
 RX MEDLINE=92316504; PubMed=1352269;
 RA Abrahamson M., Jonasson I., Olafsson I., Jansson O., Grubb A.,
 RT "Hereditary cystatin C amyloid angiopathy: identification of the
 disease-causing mutation and specific diagnosis by polymerase chain
 reaction based analysis.";
 RL Hum. Genet. 89:377-380(1992).
 CC -1- FUNCTION: As an inhibitor of cysteine proteinases, this protein is
 thought to serve an important physiological role as a local
 regulator of this enzyme activity.
 CC -1- SUBUNIT: Homodimer.
 CC -1- TISSUE SPECIFICITY: Expressed in highest levels in the epididymis,
 vas deferens, brain, thymus, and ovary and the lowest in the
 submandibular gland.
 CC -1- DISEASE: Defects in CST3 are a cause of hereditary cerebral
 hemorrhage with amyloidosis (HCHWA) (MIM:105150); also known as
 cerebral amyloid angiopathy (CAA) or cerebroretinal amyloidosis
 Icelandic type. HCHWA is characterized by a thickening of the
 cerebral artery walls with deposition of material with the
 characteristics of amyloid.
 CC -1- SIMILARITY: Belongs to the cystatin family.
 CC
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 or send an email to license@isb-sib.ch).
 CC
 CC EMBL: X05607; CAA29096.1; -
 CC EMBL: X52255; CAA36497.1; -
 CC EMBL: M27891; AAA52164.1; -
 CC EMBL: M27889; AAA52164.1; JOINED.
 CC EMBL: M27890; AAA52164.1; JOINED.
 CC EMBL: X61681; CAA43856.2; -
 CC EMBL: X61682; CAA43856.2; JOINED.
 CC EMBL: X61683; CAA43856.2; JOINED.
 CC EMBL: AF119564; AKK11570.1; -
 CC EMBL: AL121894; CAC05424.1; -
 CC EMBL: BC013083; AAH13083.1; -
 CC PIR: S10216; UDHU.
 CC PDB: 1G96; 06-APR-01.
 CC GeneW: HGNC:2475; CST3.
 CC MIM: 604312; -
 CC MIM: 105150; -
 CC InterPro: IPR000010; Cystatin.
 CC Pfam: PF00031; cystatin, 1.
 CC SMART: SM00043; CY, 1.
 CC PROSITE: PS00287; CYSTATIN, 1.
 KW Thiol protease inhibitor; Amyloid; Signal; Disease mutation;
 KW Polymorphism; 3D-structure.
 KW SIGNAL
 FT CHAIN 1 26
 FT ACT SITE 27 146
 FT SITE 37 37
 FT SITE 81 85
 FT DISULFID 99 109
 FT DISULFID 123 143
 Query Match 27.1%; Score 90.5; DB 1; Length 146;

Best Local Similarity 35.8%; Pred. No. 0.00033;
Matches 19; Conservative 10; Mismatches 21; Indels 3; Gaps 2;

QY 1 RQVTDHLEHLYANEMQWTTQCK--PETTNC-VPOERELHAKVNCFSVFAVPMF50
DB 80 KQIVGVNYPFVFKFGRTCTCKTPQNDNCPFDQPHLKKKAFCSFOIVAVPM 132

RESULT 13

CYTD_HUMAN STANDARD; PRT; 142 AA.
AC P28325;
DT 01-DEC-1992 (Rel. 24, Created)
DT 01-DEC-1992 (Rel. 24, Last sequence update)
DT 28-FEB-2003 (Rel. 41, Last annotation update)
DE Cystatin D precursor.
GN CST5.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=92041895; PubMed=1939105;
RA Freije J.P., Abrahamson M., Olafsson I., Velasco G., Grubb A.,
RT "Structure and expression of the gene encoding cystatin D, a novel
RT human cysteine proteinase inhibitor."
RT J. Biol. Chem. 266:20538-20543 (1991).
RN [2]
RP SEQUENCE FROM N.A.
RX MEDLINE=93340179; PubMed=8340398;
RA Freije J.P., Balbin M., Abrahamson M., Velasco G., Dalboge H.,
RA Grubb A., Lopez-Otin C.;
RT "Human cystatin D. cDNA cloning, characterization of the Escherichia
RT coli expressed inhibitor, and identification of the native protein in
RT saliva."
RT J. Biol. Chem. 268:15737-15744 (1993).
RN [3]
RP SEQUENCE FROM N.A.
RX MEDLINE=21638749; PubMed=11780052;
RA Deloukas P., Matthews L.H., Ashurst J., Burton J., Gilbert J.G.R.,
RA Jones M., Stavrides G., Almeida J.P., Babbage A.K., Baguley C.L.,
RA Bailey J., Barlow K.F., Bates K.N., Beard L.M., Beare D.M.,
RA Beasley O.P., Bird C.P., Blakey S.B., Bridgeman A.M., Brown A.J.,
RA Buck D., Burrill W.D., Butler A.P., Carder C., Carter N.P.,
RA Chapman J.C., Clamp M., Collier R.E., Connor R.E., Corby N.R.,
RA Clegg S., Cobley V.E., Collier G., Clark L.N., Clark S.Y., Clee C.M.,
RA Coulson A., Coville G.J., Deadman R., Dhali P.D., Dunn M.,
RA Ellington A.G., Frankland J.A., Fraser A., French L., Garner P.,
RA Grafham D.V., Griffiths C., Griffiths M.N.D., Gwilliam R., Hall R.E.,
RA Hammond S., Harley J.L., Heath P.D., Ho S., Holden J.L., Howden P.J.,
RA Huckle E., Hunt A.R., Hunt S.E., Jekosch K., Johnson C.M., Johnson D.,
RA Kay M.P., Kimberley A.M., King A., Knights A., Laird G.K., Lawlor S.,
RA Leharvelsiho M.H., Leverina M.A., Lloyd C., Lloyd D.M., Lovell J.D.,
RA Marsh V.L., Martin S.L., McConachie L.J., McElay K., McMurtry A.A.,
RA Milne S.A., Mistry D., Moore M.J.F., Mullikin J.C., Nickerson T.,
RA Oliver K., Parker A., Patel R., Pearce T.A.V., Peck A.I.,
RA Phillimore B.J.C.T., Prathalingam S.R., Plumb R.W., Ramsey H.,
RA Rice C.M., Rose M.T., Scott C.E., Sehra H.K., Showkhen R., Sims S.,
RA Stuce C.D., Smith M.L., Soderlund C., Steward C.A., Sultson J.E.,
RA Swann R.M., Symmore A.C., Taylor R., Tee L., Thomas D.W., Thorpe A.,
RA Tracey A., Tromans N.C., Vaudin M., Wall M., Wallis J.M.,
RA Whitehead S.L., Whitaker P., Willey D.L., Williams L., Williams S.A.,
RA Wilming L., Wray P.W., Hubbard T., Durbin R.M., Bentley D.R., Beck S.,
RA Rogers J.;
RT "The DNA sequence and comparative analysis of human chromosome 20."
RT Nature 414:865-871 (2001).
RN [4]
RP VARIANT ARG-46.
RX MEDLINE=93161144; PubMed=8444475;
RA Balbin M., Freije J.P., Abrahamson M., Velasco G., Lopez-Otin C.;

RT "A sequence variation in the human cystatin D gene resulting in an
RT amino acid (Cys/Arg) polymorphism at the protein level."
RT Hum. Genet. 90:668-669 (1993).

CC -1- FUNCTION: Cysteine proteinase inhibitor that possibly plays a
CC protective role against proteinases present in the oral cavity.
CC -1- TISSUE SPECIFICITY: Expressed in parotid gland but not in seminal
CC vesicle, prostate, epididymis, testis, ovary, placenta, thyroid,
CC gastric corpus, small intestine, liver, or gall bladder tissue.
CC -1- SIMILARITY: Belongs to the cystatin family.

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CC or send an email to license@ebi.ac.uk).

DR EMBL; X59964; CAA42590.1; -

DR EMBL; X70377; CAA49838.1; -

DR EMBL; AL591074; CAC94785.1; -

DR PIR; A47142; A47142.

DR HSSP; P01034; IG96.

DR Genem; HGNC:2477; CST5.

DR MIM; 123858; -

DR GO; GO:0004869; F:cysteine protease inhibitor activity; TAS.

DR InterPro; IPR000010; Cystatin.

DR Pfam; PF00031; cystatin, 1.

DR SMART; SM00043; CY, 1.

DR PROSITE; PS00287; CYSTATIN, 1.

KM Thiol protease inhibitor; Signal; Polymorphism.

FT SIGNAL 1 20 PROBABLE.

FT CHAIN 21 142 CYSTATIN D.

FT ACT_SITE 22 22 REACTIVE SITE (BY SIMILARITY).

FT SITE 70 74 SECONDARY AREA OF CONTACT.

FT DISULFID 95 105 BY SIMILARITY.

FT DISULFID 119 139 BY SIMILARITY.

FT VARIANT 46 46 C -> R (IN 45% OF THE POPULATION;
FT dbsnp:1799841).

FT FTID=VAR_002208.

SO SEQUENCE 142 AA; 16080 MW; CEFA98A87A0DA68 CRC64;

Query Match 26.8%; Score 89.5; DB 1; Length 142;

Best Local Similarity 32.8%; Pred. No. 0.00043;

Matches 20; Conservative 12; Mismatches 26; Indels 3; Gaps 2;

QY 1 RQVTDHLEHLYANEMQWTTQCK--PETTNC-VPOERELHAKVNCFSVFAVPMF50
DB 76 KQIVGVNYPFVFKFGRTCTCKTPQNDNCPFDQPHLKKKAFCSFOIVAVPMF50
DB 136 N 136

QY 58 N 58
DB 136 N 136

DB 136 N 136

DB 136 N 136

DB 136 N 136

DB 136 N 136

DB 136 N 136

DB 136 N 136

DB 136 N 136

DB 136 N 136

DB 136 N 136

DB 136 N 136

DB 136 N 136

DB 136 N 136

DB 136 N 136

DB 136 N 136

DB 136 N 136

RT "Cystatin C. Icelandic-like mutation in an animal model of
 RL cerebrovascular beta-amyloidosis.";
 RT Serebrovaskular beta-amyloidosis.";
 CC -1- FUNCTION: As an inhibitor of cysteine proteinases, this protein is
 CC thought to serve an important physiological role as a local
 CC regulator of this enzyme activity.
 CC -1- SIMILARITY: Belongs to the cystatin family.
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 CC -----
 CC EMBL: U51912; AAB64050.1; -.
 DR HSSP: P01034; 1G96.
 DR InterPro: IPR000010; Cystatin.
 DR Pfam: PF00031; Cystatin; 1.
 DR SMART: SM00043; CY; 1.
 DR PROSITE: PS00287; CYSTATIN; 1.
 KW Thiol protease inhibitor; Amyloid; Signal.
 FT SIGNAL 1 26
 FT CHAIN 27 146
 FT ACT SITE 37 37 REACTIVE SITE.
 FT SITE 81 85 SECONDARY AREA OF CONTACT.
 FT DISUFID 99 109 BY SIMILARITY.
 FT DISUFID 123 143 BY SIMILARITY.
 SQ SEQUENCE 146 AA; 15857 MW; F0B3BB774A29DF26 CRC64;
 Query Match 26.8%; Score 89.5; DB 1; Length 146;
 Best Local Similarity 35.8%; Pred. No. 0.00044;
 Matches 19; Conservative 10; Mismatches 21; Indels 3; Gaps 2;
 QY 1 RQVTDHLEHIANEMQWTTCKP--PTTNCVCPQER-ELHQVQNFESVAVPW 50
 DB 80 KQIVAGVNYFLDVMGRTTCTKQTNLDNCFPHQPKKAFCSFOIYVWP 132
 RESULT 15
 CYTC MOUSE STANDARD; PRT; 140 AA.
 ID CYTC_MOUSE
 AC P21460;
 DT 01-MAY-1991 (Rel. 18, Created)
 DT 01-FEB-1996 (Rel. 33, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Cystatin C precursor (Cystatin 3).
 GN CST3.
 OS Mus musculus (Mouse).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
 OC NCBI_TaxID=10090;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN=BALB/C; TISSUE=Brain;
 RC MEDLINE=91054522; PubMed=2241983;
 RA Solem M., Rawson C., Lindburg K., Barnes D.;
 RT "Transforming growth factor beta regulates cystatin C in serum-free
 RT mouse embryo (SME) cells.";
 RL Biochem. Biophys. Res. Commun. 172:945-951(1990).
 RN [2]
 RP SEQUENCE FROM N.A.
 RC STRAIN=129/SV; TISSUE=Liver;
 RC MEDLINE=9517397; PubMed=7835704;
 RA Huh C., Nagle J.W., Kozak C.A., Abrahamson M., Karlsson S.;
 RT "Structural organization, expression and chromosomal mapping of the
 RT mouse cystatin-C-encoding gene (Cst3).";
 RL Gene 152:221-226(1995).
 RN [3]
 RP SEQUENCE FROM N.A.
 RC STRAIN=IIS, and IIS;
 RX MEDLINE=21363810; PubMed=11471062;

RA Ehringer M.A., Thompson J., Conroy O., Xu Y., Yang F., Canniff J.,
 RA Beeson M., Gordon L., Bennett B., Johnson T.E., Sikela J.M.;
 RT "High-throughput sequence identification of gene coding variants
 RT within alcohol-related QTLs.";
 RL Mamm. Genome 12:657-663(2001).
 RN [4]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=22388257; PubMed=12477932;
 RA Krausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
 RA Stranser R.D., Collins F.S., Wagner L., Shennan C.M., Schuler G.D.,
 RA Altschul S.F., Zeeberg B., Buelow K.H., Schaefer C.F., Bhat N.K.,
 RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
 RA Diatzenko L., Marusik K., Farmer A.A., Rubin G.M., Hong L.,
 RA Brownstein M.J., Ustin T.B., Tohiyuki S., Casavini T.L., Schaefer T.E.,
 RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullany S.J.,
 RA Bosak S.A., McKernan K.J., Malek J.A., Gunaratne P.H.,
 RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.O., Hulyk S.W.,
 RA Villalón D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
 RA Fahy J., Helton E., Ketterman M., Madan A., Rodriguez S., Sanchez A.,
 RA Blakeley R.W., Touchman J.W., Green E.D., Dickson M.C.,
 RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
 RA Butterfield Y.S.N., Krzywicki M.I., Skalska U., Smailus D.E.,
 RA Stencher A., Schein J.E., Jones S.J.M., Marra M.A.;
 RT "Generation and initial analysis of more than 15,000 full-length
 RT human and mouse cDNA sequences.";
 RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
 CC -1- FUNCTION: As an inhibitor of cysteine proteinases, this protein is
 CC thought to serve an important physiological role as a local
 CC regulator of this enzyme activity.
 CC -1- SIMILARITY: Belongs to the cystatin family.
 CC -----
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 CC -----
 CC EMBL: M59470; AAB63298.1; -.
 DR EMBL: U10098; AAB41056.1; -.
 DR EMBL: AF483486; AAL90760.1; -.
 DR EMBL: AF483487; AAL90761.1; -.
 DR EMBL: BC002072; AAB02072.1; -.
 DR PIR: A36163; A36163.
 DR HSSP: P01034; 1G96.
 DR WGD; MGI:102519; Cat3.
 DR InterPro: IPR000010; Cystatin.
 DR Pfam: PF00031; Cystatin; 1.
 DR SMART: SM00043; CY; 1.
 DR PROSITE: PS00287; CYSTATIN; 1.
 KW Thiol protease inhibitor; Signal.
 FT SIGNAL 1 20
 FT CHAIN 21 140
 FT ACT SITE 31 31 REACTIVE SITE.
 FT SITE 75 79 SECONDARY AREA OF CONTACT.
 FT DISUFID 93 103 BY SIMILARITY.
 FT DISUFID 117 137 BY SIMILARITY.
 FT DISUFID 16 16 A -> G (IN REF. 1).
 FT CONFLICT 84 84 L -> F (IN REF. 1).
 SQ SEQUENCE 140 AA; 15531 MW; 3A563406D58D0F5 CRC64;
 Query Match 26.5%; Score 88.5; DB 1; Length 140;
 Best Local Similarity 35.8%; Pred. No. 0.00056;
 Matches 19; Conservative 12; Mismatches 19; Indels 3; Gaps 2;
 QY 1 RQVTDHLEHIANEMQWTTCKPPT--TNC-VEQERLHAKVQNFESVAVPW 50
 DB 74 KQIVAGVNYFLDVMGRTTCTKQTNLDNCFPHQPKKAFCSFOIYVWP 126

Wed Mar 24 09:21:12 2004

Search completed: March 23, 2004, 17:11:07
Job time : 7.66527 secs

us-09-941-314-16.rsp

Page 11

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: March 23, 2004, 17:05:48 ; Search time 31.5983 Seconds
(without alignments)
589.132 Million cell updates/sec

Title: US-09-941-314-16
Perfect score: 334
Sequence: 1 RQVTDHLEHYLNEMQWTC.....NCFPSVAVPWFQYKILNK 59

Scoring table: BIOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1017041 seqs, 315518202 residues
Total number of hits satisfying chosen parameters: 1017041

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database :

SPTREMBL 25: *
1: sp_archaea: *
2: sp_bacteria: *
3: sp_fungi: *
4: sp_human: *
5: sp_invertebrate: *
6: sp_mammal: *
7: sp_mhc: *
8: sp_organelle: *
9: sp_phage: *
10: sp_plant: *
11: sp_rodent: *
12: sp_virus: *
13: sp_vertebrate: *
14: sp_unclassified: *
15: sp_virus: *
16: sp_bacteriopl: *
17: sp_archaeap: *

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	334	100.0	138	4	Q8WUX6
2	193	57.8	139	11	Q8K5A3
3	127	38.0	103	4	Q8WUX5
4	107.5	32.2	141	11	Q9DAP1
5	107.5	32.2	141	11	Q80ZNS
6	96	28.7	140	11	Q80772
7	91.5	27.4	140	11	Q9EPX9
8	86	25.7	167	4	Q7Z4U8
9	83	24.9	130	11	Q9CX46
10	83	24.9	130	11	Q8V113
11	81.5	24.4	148	11	Q9JMB4
12	80	24.0	130	11	Q8V1H8
13	80	24.0	167	11	Q9QWL5
14	73	21.9	128	11	Q9DAN8
15	71	21.3	128	11	Q8V112
16	70	21.0	506	5	Q44421

17	69	20.7	1779	5	Q18150	018150 caenorhabdi
18	67.5	20.2	149	11	Q8VHC1	Q8VHC1 ratu
19	65.5	19.6	146	11	Q8K397	Q8K397 mus muscu
20	65.5	19.6	149	11	Q9D1B1	Q9D1B1 mus muscu
21	65	19.5	311	11	Q7R18	Q7R18 mus muscu
22	63.5	19.0	314	13	Q7SKX6	Q7SKX6 brachydanio
23	63.5	19.0	633	5	Q9U5A9	Q9U5A9 manduca sex
24	63	18.9	564	5	Q95T11	Q95T11 drosophila
25	63	18.9	593	5	Q917D7	Q917D7 drosophila
26	61.5	18.4	127	5	Q9U9A1	Q9U9A1 onchocerca
27	61.5	18.4	498	10	Q94BM0	Q94BM0 hordium vul
28	61.5	18.4	1720	10	Q94BM2	Q94BM2 hordium vul
29	61	18.3	322	16	Q8DAX4	Q8DAX4 vibrio vuln
30	61	18.3	447	12	Q9QAX5	Q9QAX5 sitilawan vi
31	60.5	18.1	144	13	Q8TUF5	Q8TUF5 brachydanio
32	60.5	18.1	1717	10	Q94BM1	Q94BM1 hordium vul
33	60	18.0	112	13	Q96SR4	Q96SR4 acipenser s
34	60	18.0	112	13	Q96SR3	Q96SR3 acipenser s
35	60	18.0	174	12	Q56327	Q56327 simian viru
36	60	18.0	400	13	Q8UVR3	Q8UVR3 xenopus lae
37	60	18.0	905	12	Q9W911	Q9W911 yellow feve
38	60	18.0	3411	12	Q91857	Q91857 yellow feve
39	60	18.0	3411	12	Q89276	Q89276 yellow feve
40	60	18.0	3411	12	Q89275	Q89275 yellow feve
41	60	18.0	3411	12	Q9YWN0	Q9YWN0 yellow feve
42	60	18.0	3411	12	Q9YWN1	Q9YWN1 yellow feve
43	60	18.0	3411	12	Q89278	Q89278 yellow feve
44	60	18.0	3411	12	Q89277	Q89277 yellow feve
45	60	18.0	3411	12	Q9YWN2	Q9YWN2 yellow feve

ALIGNMENTS

RESULT 1	
ID Q8WUX6	PRELIMINARY; PRT; 138 AA.
AC Q8WUX6;	
DT 01-MAR-2002 (TREMBlrel. 20, Created)	
DT 01-MAR-2002 (TREMBlrel. 20, Last sequence update)	
DT 01-JUN-2003 (TREMBlrel. 24, Last annotation update)	
DE SC13.	
OS Homo sapiens (Human).	
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;	
OC Mammalia; Eutheria; Primates; Catarrhini; Homiidae; Homo.	
OX NCBI_Taxid=9606;	
RN [1]	
RP SEQUENCE FROM N.A.	
RA Hamil K.G., Liu Q., Zhang Y.-L., French P.S., Hall S.H.;	
RT "SC13: A novel epididymal specific member of the cystatin family."	
RL Submitted (JAN-2001) to the EMBL/GenBank/DBJ databases.	
DR EMBL; AF35480; AAL7191.1; -	
DR GO; GO:0004869; F:cysteine protease inhibitor activity; IEA.	
DR InterPro; IPR000010; Cystatin.	
DR Pfam; PF00031; Cystatin; 1.	
DR SMART; SM00043; CY; 1.	
SQ SEQUENCE 138 AA; 16506 MW; E49440ACA3585C64 CRC64;	
Query Match	100.0%; Score 334; DB 4; Length 138;
Best Local Similarity	100.0%; Pred. No. 2,2e-36;
Matches 59; Conservative 0; Mismatches 0; Indels 0; Gaps 0;	
QY 1 RQVTDHLEHYLNEMQWTCQKPEETNCVQERELHKQVNCFPVSFAVPWFQYKILNK 59	
Db 75 RQVTDHLEHYLNEMQWTCQKPEETNCVQERELHKQVNCFPVSFAVPWFQYKILNK 133	
RESULT 2	
ID Q8K5A3	PRELIMINARY; PRT; 139 AA.
AC Q8K5A3;	
DT 01-OCT-2002 (TREMBlrel. 22, Created)	
DT 01-OCT-2002 (TREMBlrel. 22, Last sequence update)	

DT 01-JUN-2003 (TREMBlrel. 24, last annotation update)
 DE Cystatin 11.
 GN GST11.
 OS Rattus norvegicus (Rat).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
 OX NCBI_TaxID=10116;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN=Sprague-Dawley;
 RA Hamil K.G., Hall S.H.;
 RL Submitted (Apr-2002) to the EMBL/GenBank/DBJ databases.
 DR EMBL; AF501290; AA021709.1; -
 DR GO; GO:0004869; F:cysteine protease inhibitor activity; IEA.
 DR InterPro; IPR000010; Cystatin.
 DR Pfam; PF00031; Cystatin; 1.
 DR SMART; SM00043; Cy; 1.
 SQ SEQUENCE 139 AA; 1686 MW; E1E36DB786B4D08C CRC64;

Query Match 57.8%; Score 193; DB 11; Length 139;
 Best Local Similarity 54.2%; Pred. No. 1.1e-17;
 Matches 33; Conservative 12; Mismatches 15; Indels 0; Gaps 0;

QY 1 QVTDHLEVLNEMQTTCKPEPTTCVQPERELHQNCFSEVFAVPMFEOYKILNK 59
 DB 75 KQMTNMEPHITVEMQRTTCKTEKNLCNVQEGELHKOICVFSEVYIPLMEVFKMLKK 133

RESULT 3
 Q8MXU5 PRELIMINARY; PRT; 103 AA.
 AC Q8MXU5;
 DT 01-MAR-2002 (TREMBlrel. 20, Created)
 DT 01-MAR-2002 (TREMBlrel. 20, last sequence update)
 DT 01-JUN-2003 (TREMBlrel. 24, last annotation update)
 DE SC13delta.
 OS Homo sapiens (Human).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Primates; Carnivora; Homnidae; Homo.
 OX NCBI_TaxID=9606;
 RN [1]
 RP SEQUENCE FROM N.A.
 RA Hamil K.G., Liu Q., Zhang Y.-L., French P.S., Hall S.H.;
 RT "SC13: A novel epididymal specific member of the cystatin family."
 RL Submitted (Jan-2001) to the EMBL/GenBank/DBJ databases.
 DR EMBL; AF35481; AA171992.1; -
 DR GO; GO:0004869; F:cysteine protease inhibitor activity; IEA.
 DR InterPro; IPR000010; Cystatin.
 DR Pfam; PF00031; Cystatin; 1.
 SQ SEQUENCE 103 AA; 12285 MW; 05DD92C47387B022 CRC64;

Query Match 38.0%; Score 127; DB 4; Length 103;
 Best Local Similarity 43.8%; Pred. No. 4.6e-09;
 Matches 28; Conservative 8; Mismatches 12; Indels 16; Gaps 2;

QY 7 LEVHINEMQTTCKPEPTTCVQPERELH-----KQVNCFFSVFAVPMFEOYK 55
 DB 40 VENYAKSLQWIDQYNKES-----DDKYNHRIKRVKVGQVNCFFSVFAVPMFEOYK 94

QY 56 ILNK 59
 DB 95 ILNK 98

RESULT 4
 Q9DAP1 PRELIMINARY; PRT; 141 AA.
 AC Q9DAP1;
 DT 01-JUN-2001 (TREMBlrel. 17, Created)
 DT 01-JUN-2001 (TREMBlrel. 17, last sequence update)
 DT 01-JUN-2003 (TREMBlrel. 24, last annotation update)
 DE 1700006C19RIK protein.
 GN 1700006C19RIK.

OS Mus musculus (Mouse).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
 OX NCBI_TaxID=10090;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN=C57BL/6J; TISSUE=Testis;
 RX MEDLINE=21085660; PubMed=11217851;
 RA Kawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ichii Y.,
 RA Arahata T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,
 RA Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamataka I.,
 RA Saito T., Okazaki Y., Gojobori T., Bono H., Kasuawa T., Saito R.,
 RA Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
 RA Fleischnann W., Gaasterland T., Giesl C., King B., Kochwa H.,
 RA Kiehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
 RA Schirral L.M., Stambli F., Suzuki R., Tomita M., Wagner L., Mashio T.,
 RA Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barch G.,
 RA Blake J., Boffelli D., Bojunga N., Carrinci P., de Bernaldo M.F.,
 RA Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
 RA Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
 RA Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,
 RA Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
 RA Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
 RA Suzuki H., Toyooka K., Wang K.H., Weitz C., Whitaker C., Wilmink L.,
 RA Wyshaw-Boris A., Yoshida K., Hasegawa Y., Kawai H., Kohsaki S.,
 RA Hayashizaki Y.;
 RT "Functional annotation of a full-length mouse cDNA collection.";
 RL Nature 409:685-690(2001).
 DR EMBL; AK05665; BAB24175.1; -
 DR HSP; P01038; ICBW.
 DR WGI; WGI:1516544; 1700006C19RIK.
 DR GO; GO:0004869; F:cysteine protease inhibitor activity; IEA.
 DR InterPro; IPR000010; Cystatin.
 DR Pfam; PF00031; Cystatin; 1.
 DR SMART; SM00043; Cy; 1.
 SQ SEQUENCE 141 AA; 16811 MW; C20FA0B81AC378C CRC64;

Query Match 32.2%; Score 107.5; DB 11; Length 141;
 Best Local Similarity 39.3%; Pred. No. 2.5e-06;
 Matches 24; Conservative 12; Mismatches 22; Indels 3; Gaps 2;

QY 2 QVTDHLEVLNEMQTTCK--PEPTNCV--QPERELHQNCFSEVFAVPMFEOYKILNK 58
 DB 76 QITDSLEYLVNEMQTTCKVAGDNECLFQDPKXKXVFCIFVSSKPMFELMKL 135

QY 59 K 59
 DB 136 K 136

RESULT 5
 Q80ZNS PRELIMINARY; PRT; 141 AA.
 AC Q80ZNS;
 DT 01-JUN-2003 (TREMBlrel. 24, Created)
 DT 01-JUN-2003 (TREMBlrel. 24, last sequence update)
 DT 01-OCT-2003 (TREMBlrel. 25, last annotation update)
 DE RIKEN cDNA 1700006C19 gene.
 OS Mus musculus (Mouse).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
 OX NCBI_TaxID=10090;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Testicle;
 RA Strauberg R.;
 RL Submitted (MAR-2003) to the EMBL/GenBank/DBJ databases.
 DR EMBL; BC048681; AA48681.1; -
 DR GO; GO:0004869; F:cysteine protease inhibitor activity; IEA.
 DR InterPro; IPR000010; Cystatin.
 DR InterPro; IPR002443; Cystatin_C/M.
 DR Pfam; PF00031; Cystatin; 1.
 DR ProDom; PD001231; Cystatin_C/M; 1.

DR SMART: SM00043; CY: 1.
SQ SEQUENCE 141 AA; 16825 MM; C20FA0DBA84951F CRC64;
Query Match 32.2%; Score 107.5; DB 11; Length 141;
Best Local Similarity 39.3%; Pred. No. 2.5e-06;
Matches 24; Conservative 12; Mismatches 22; Indels 3; Gaps 2;
Qy 2 QVTDHLEHYHNVEMQWTTCK--PETNVC-ROBERLHKOVNCFPSVFAVPMFEQYKILN 58
Db QITDSLEYEVLNARIKTKKAGNENCLFQDDPKMKVFCIFIVSSKPMKELMLK 135
Qy 59 K 59
Db 136 K 136
RESULT 6
ID 080Y72 PRELIMINARY; PRT; 140 AA.
AC 080Y72;
DT 01-JUN-2003 (TrEMBLrel. 24, Created)
DT 01-JUN-2003 (TrEMBLrel. 24, Last sequence update)
DT 01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DE Cystatin-like 1.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=Testicle;
RX MEDLINE=2238825; PubMed=12477932;
RA Strauberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Datchenko L., Marusik K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Brownstein M.J., Ueda T.B., Tomihata S., Carninci F., Prange C.,
RA Raha S.S., Loguclano N.A., Peters G.J., Abramson R.D., Mullaly S.J.,
RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Fahy J., Helton E., Kettman M., Madan A., Rodriguez S., Sanchez A.,
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,
RA Krzywinski M.I., Skalska U., Smallos D.B., Scherch A., Schein J.E.,
RA Jones S.J., Marra M.A.;
RT "Generation and initial analysis of more than 15,000 full-length human
RT and mouse cDNA sequences."
RT Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN [2]
RP SEQUENCE FROM N.A.
RC TISSUE=Testicle;
RA Strauberg R.;
RL Submitted (MAR-2003) to the EMBL/GenBank/DBJ databases.
DR EMBL; BC048646; AA048646.1; -
DR GO; GO:0004869; F:cysteine protease inhibitor activity; IEA.
DR InterPro; IPR000010; Cystatin.
DR InterPro; IPR003243; Cystatin_C/M.
DR Pfam; PF00031; Cystatin_1.
DR PRODom; PD001231; Cystatin_C/M; 1.
DR SMART; SM00043; CY; 1.
SQ SEQUENCE 140 AA; 16199 MM; 32633B99C4697DA0 CRC64;
Query Match 28.7%; Score 96; DB 11; Length 140;
Best Local Similarity 33.9%; Pred. No. 8.2e-05;
Matches 20; Conservative 14; Mismatches 23; Indels 2; Gaps 1;
Qy 2 QVTDHLEHYHNVEMQWTTCKPET--TNCVPOBERLHKOVNCFPSVFAVPMFEQYKILN 58
Db QLTGVEYLVTVKIGRTKCKKNETKASCPLOSSTLTKSLCKSLISVPMNYYQLN 134

RESULT 7
ID 09EPX9 PRELIMINARY; PRT; 140 AA.
AC 09EPX9;
DT 01-MAR-2001 (TrEMBLrel. 16, Created)
DT 01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
DT 01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DE Cystatin C.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=BALB/C;
RX MEDLINE=21010502; PubMed=11144350;
RA Taupin P.J., Ray J., Fischer W.H., Suhr S.T., Hakansson K., Grubb A.,
RA Gage F.H.;
RT "Pgf-2-Responsive neural stem cell proliferation requires CCG, a novel
RT autocrine/paracrine cofactor."
RL Neuron 28:385-397(2000).
DR EMBL; AF111741; AAC40283.1; -
DR HSSP; P01034; 1G96.
DR GO; GO:0004869; F:cysteine protease inhibitor activity; IEA.
DR InterPro; IPR000010; Cystatin.
DR Pfam; PF00031; Cystatin_1.
DR SMART; SM00043; CY; 1.
DR PROSITE; PS00287; CYSTATIN; 1.
FT CHAIN 21 140
FT VARIANT 16 16 A -> G.
FT VARIANT 84 84 L -> P.
SQ SEQUENCE 140 AA; 15517 MM; 3A563406D58D785 CRC64;
Query Match 27.4%; Score 91.5; DB 11; Length 140;
Best Local Similarity 32.4%; Pred. No. 0.00033;
Matches 20; Conservative 14; Mismatches 24; Indels 3; Gaps 2;
Qy 1 RQVTDHLEHYHNVEMQWTTCKPET--TNC-VPQBERLHKOVNCFPSVFAVPMFEQYKIL 57
Db KQVAVAGNVYLDVEMGRTTCTKSQTLTDCPFHDPHLKALCSFOIVSVPMKGTSLT 133
Qy 58 N 58
Db 134 N 134
RESULT 8
ID 07Z4J8 PRELIMINARY; PRT; 167 AA.
AC 07Z4J8;
DT 01-OCT-2003 (TrEMBLrel. 25, Created)
DT 01-OCT-2003 (TrEMBLrel. 25, Last sequence update)
DT 01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DE Cystatin F (Leukocystatin).
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A.
RA Kainline N., Chen X., Rolfe A., Halleck A., Hines L., Eisenstein S.,
RA Koundinya M., Raphael J., Moreira D., Kelley T., Ladaer J., Lin Y.,
RA Pielan M., Farmer A.;
RL Submitted (AUG-2003) to the EMBL/GenBank/DBJ databases.
DR EMBL; BT009825; AAP88827.1; -
SQ SEQUENCE 167 AA; 18857 MM; E339025A5BD60177 CRC64;
Query Match 25.7%; Score 86; DB 4; Length 167;
Best Local Similarity 32.2%; Pred. No. 0.0021;
Matches 19; Conservative 14; Mismatches 22; Indels 4; Gaps 2;

QY 2 QVTDHLEHYNEMQWTTCKPE--TTNCVPOERELHKO-VNCFPSVFAVPMFEQYKIL 56
 Db 103 QIVAGKLYMVELEIGRTTCKKNQHLRDDCDPQFNHTLTKQTLSCYSEKVMVPMIQLHFEV 161

RESULT 9

ID Q9CX46 PRELIMINARY; PRT; 130 AA.
 AC Q9CX46;
 DT 01-JUN-2001 (TREMBlrel. 17, Created)
 DT 01-JUN-2001 (TREMBlrel. 17, Last sequence update)
 DT 01-JUN-2003 (TREMBlrel. 24, Last annotation update)
 DE 8030411F24RIK protein.
 GN 8030411F24RIK.
 OS Mus musculus (Mouse).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
 OX NCBI_TaxID=10090;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN=C57BL/6J; TISSUE=Embryonic testis;
 RX MEDLINE=21085660; PubMed=11217851;
 RA Kawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
 RA Aizawa K., Izawa M., Mishi K., Kiyosawa H., Kondo S., Yamataka I.,
 RA Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,
 RA Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
 RA Fleischmann W., Gaasterland T., Gissi C., King B., Kochwa H.,
 RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
 RA Schiraldi L.M., Staahl F., Suzuki R., Tomita M., Wagner L., Washio T.,
 RA Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
 RA Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
 RA Gueniche S., Hill D., Hofmann M., Hume D.A., Kamita M., Lee N.H.,
 RA Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,
 RA Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
 RA Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
 RA Suzuki H., Toyooka K., Wang K.H., Weitz C., Whitaker C., Wilming L.,
 RA Wysshaw-Boris A., Yoshida K., Haegawa Y., Kawai H., Kohlsauki S.,
 RA Hayaishizaki Y.;
 RA "Functional annotation of a full-length mouse cDNA collection.";
 RL Nature 409:685-690(2001).
 DR EMBL; AK020193; BAB32024.1; -.
 DR HSSP; P01034; 1G96.
 DR MGD; MGI:1925859; 8030411F24RIK.
 DR GO; GO:0004869; F:cysteine protease inhibitor activity; IEA.
 DR InterPro; IPR000010; Cystatin.
 DR Pfam; PF00031; cystatin; 1.
 DR SMART; SM00043; CY; 1.
 SQ SEQUENCE 130 AA; 14947 MW; DD2F930B64B4E584 CRC64;
 Query Match 24.9%; Score 83; DB 11; Length 130;
 Best Local Similarity 36.7%; Pred. No. 0.004; Indels 2; Gaps 1;
 Matches 18; Conservative 9; Mismatches 20;
 QY 11 LNVEMQWTTCKPE--NCVPOERELHKO-VNCFPSVFAVPMFEQYKIL 57
 Db 75 MDEMGRTICKKHENHNCPLDQSGREKVCVFOVDARPMFSHTIL 123

RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN=C57; TISSUE=Testis;
 RA Li Y., Friel P.J., Gilewold M.D.;
 RT "Molecular cloning and characterization of cystatin SC and cystatin
 RT TE-1, new members of the cystatin family.";
 RL Submitted (OCT-2001) to the EMBL/GenBank/DBJ databases.
 DR EMBL; AF40735; AAL30841.1; -.
 DR MGD; MGI:1925859; 8030411F24RIK.
 DR GO; GO:0004869; F:cysteine protease inhibitor activity; IEA.
 DR InterPro; IPR000010; Cystatin.
 DR Pfam; PF00031; cystatin; 1.
 DR SMART; SM00043; CY; 1.
 SQ SEQUENCE 130 AA; 15076 MW; DD34930B64AE58F CRC64;
 Query Match 24.9%; Score 83; DB 11; Length 130;
 Best Local Similarity 36.7%; Pred. No. 0.004; Indels 2; Gaps 1;
 Matches 18; Conservative 9; Mismatches 20;
 Db 75 MDEMGRTICKKHENHNCPLDQSGREKVCVFOVDARPMFSHTIL 123

RESULT 11

ID Q9JMB4 PRELIMINARY; PRT; 148 AA.
 AC Q9JMB4;
 DT 01-OCT-2000 (TREMBlrel. 15, Created)
 DT 01-OCT-2000 (TREMBlrel. 15, Last sequence update)
 DT 01-JUN-2003 (TREMBlrel. 24, Last annotation update)
 DE D072 protein (similar to cystatin 10) (Chondrocytes).
 GN C0710 OR D072.
 OS Mus musculus (Mouse).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
 OX NCBI_TaxID=10090;
 RN [1]
 RP SEQUENCE FROM N.A.
 RA Ikegawa S., Nakamura Y.;
 RT "D072, a novel mouse gene implicated in the early stage of ectopic
 RT ossification.";
 RL Submitted (JAN-2000) to the EMBL/GenBank/DBJ databases.
 RN [2]
 RP SEQUENCE FROM N.A.
 RC STRAIN=FVB/N; TISSUE=Salivary gland;
 RA Strausberg R.;
 RL Submitted (MAR-2003) to the EMBL/GenBank/DBJ databases.
 DR EMBL; AB036743; BAA95411.1; -.
 DR EMBL; BC048364; AAI48364.1; -.
 DR HSSP; P01034; 1G96.
 DR MGD; MGI:1930004; C0710.
 DR GO; GO:0004869; F:cysteine protease inhibitor activity; IEA.
 DR InterPro; IPR000010; Cystatin.
 DR Pfam; PF00031; cystatin; 1.
 DR PRINTS; PR00295; STEFINA.
 DR SMART; SM00043; CY; 1.
 DR PROSITE; PS00287; CYSTATIN; 1.
 SQ SEQUENCE 148 AA; 16451 MW; 637534CBFC5AA179 CRC64;
 Query Match 24.4%; Score 81.5; DB 11; Length 148;
 Best Local Similarity 31.1%; Pred. No. 0.0073; Indels 3; Gaps 2;
 Matches 19; Conservative 12; Mismatches 27;
 QY 1 ROYTDHLEHYNEMQWTTCKPE--TNCVPOER-ELHKO-VNCFPSVFAVPMFEQYKIL 57
 Db 82 QIVAGKLYMVELEIGRTTCKKNQHLRDDCDPQFNHTLTKQTLSCYSEKVMVPMIQLHFEV 161

QY 58 N 58
 Db 142 N 142

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OM protein - protein search, using sw model

Run on: March 23, 2004, 17:04:13 ; Search time 38.3598 Seconds
(without alignments)
353.554 Million cell updates/sec

Title: US-09-941-314-17
Perfect score: 273
Sequence: 1 NVMQMWTGQKPEETNCVPQ.....NCFPSVFAVPWFQYKILNK 48

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1586107 seqs, 282547505 residues
Total number of hits satisfying chosen parameters: 1586107

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_29Jan04:*
1: geneseqp1980s:*
2: geneseqp1990s:*
3: geneseqp2000s:*
4: geneseqp2001s:*
5: geneseqp2002s:*
6: geneseqp2003as:*
7: geneseqp2003bs:*
8: geneseqp2004s:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	273	100.0	48	AAU79867	AAU79867 Human cys.
2	273	100.0	59	AAU79866	AAU79866 Human cys.
3	273	100.0	80	AAU79865	AAU79865 Human cys.
4	273	100.0	115	AAU79853	AAU79853 Human cys.
5	273	100.0	117	AAU79854	AAU79854 Human cys.
6	273	100.0	137	AAU79852	AAU79852 Human cys.
7	133	48.7	33	AAU79862	AAU79862 Human cys.
8	133	48.7	52	AAU79864	AAU79864 Human cys.
9	107.5	39.4	142	AAE02404	AAE02404 Murine cy
10	107.5	39.4	142	AAE04433	AAE04433 Mouse spe
11	107.5	39.4	143	ADAI4374	ADAI4374 Mouse spe
12	100.5	36.8	142	ADDA6708	ADDA6708 Rat Prote
13	100.5	36.8	142	ADDA6704	ADDA6704 Rat Prote
14	95.5	35.0	148	AAU09877	AAU09877 Novel hum
15	93	34.1	46	AAU79860	AAU79860 Human cys
16	93	34.1	49	AAU79863	AAU79863 Human cys
17	93	34.1	132	AAU79836	AAU79836 Human ZCY
18	92.5	33.9	148	ABP60965	ABP60965 Novel hum
19	92.5	33.9	148	AAU79364	AAU79364 Human ZCY
20	87	31.9	145	AAE04315	AAE04315 Altermacti
21	87	31.9	145	AAE04323	AAE04323 Human ZCY
22	87	31.9	145	AAE04887	AAE04887 Human pro
23	87	31.9	145	AAU76578	AAU76578 Human ZCY
24	87	31.9	145	AAU76555	AAU76555 Human cys
25	87	31.9	145	ABG75925	ABG75925 Human cys

26	87	31.9	145	6	ABG75917	Abg75917 Human cys
27	87	31.9	165	4	AAE04324	Aae04324 Human ZCY
28	87	31.9	165	5	AAU76556	Aau76556 Human cys
29	87	31.9	165	6	ABG75918	Abg75918 Human cys
30	86	31.3	145	4	AAU08667	Aau08667 Human NOV
31	85.5	31.3	92	2	AAW78259	Aaw78259 Fragment
32	85.5	31.3	123	2	AAW78260	Aaw78260 Fragment
33	85.5	31.3	142	2	AAW78258	Aaw78258 Fragment
34	85.5	31.3	142	4	AAE02405	Aae02405 Human cys
35	85.5	31.3	142	4	AAE04434	Aae04434 Human cys
36	85.5	31.3	142	6	ADA57231	Ada57231 Human sec
37	85.5	31.3	142	6	ADA41112	Ada41112 Human sec
38	85.5	31.3	142	7	ADC74335	Adc74335 Human sec
39	85.5	31.3	142	7	ADD37980	Add37980 Human sec
40	85.5	31.3	142	7	ADDA6706	Add6706 Human pro
41	85.5	31.3	142	7	ADDA6710	Add6710 Human pro
42	81.5	29.9	116	3	AAV81210	Aay81210 Egg white
43	81.5	29.9	121	3	AAV81156	Aay81156 Human mut
44	80.5	29.5	96	3	AAV91651	Aay91651 Human sec
45	80.5	29.5	116	3	AAV81212	Aay81212 Egg white

ALIGNMENTS

RESULT 1
ID AAU79867 standard; peptide; 48 AA.
XX
AC AAU79867;
XX
DT 15-JUL-2002 (first entry)
XX
DE Human cystatin-8 (Zcys8) antigenic fragment #15.
XX
XX Cystatin-8; Zcys8; cancer; procoagulant protein; thrombosis;
KM spermatogenesis; seminal fluid viscosity; cryopreserved sperm;
KW sperm motility; fertilisation; antigenic peptide.
XX
OS Homo sapiens.
XX
PN WO200220567-A2.
XX
PD 14-MAR-2002.
XX
PF 29-AUG-2001; 2001MO-US026868.
XX
PR 01-SEP-2000; 2000US-0230230P.
XX
PA (ZYMO) ZYMOGENETICS INC.
XX
PI Holloway JL, Gao Z, Bishop PD;
XX
DR WPI; 2002-383044/41.
XX
PT Novel isolated mammalian cystatin-8 polypeptide useful for promoting
PT spermatogenesis, and inhibiting cancer procoagulant protein which leads
PT to inhibition of thrombotic events associated with cancer.
XX
PS Claim 2; Page 99; 100pp; English.
XX
CC The invention describes an isolated mammalian cystatin-8 (Zcys8)
CC polypeptide (I). (I) is useful for: inhibiting cancer procoagulant
CC protein in an individual and thus inhibiting the thrombotic events
CC associated with cancer; promoting spermatogenesis, modulating seminal
CC fluid viscosity, enhancing viability of cryopreserved sperm, sperm
CC motility and fertilisation; and as antigenic peptides to generate
CC antibodies. Zcys8 is useful as research reagent for characterising sites
CC of interaction between Zcys8 and its receptor. Zcys8 is useful in
CC enhancing fertilisation during assisted reproduction in humans and in
CC animals. Anti-(I) antibodies are useful to screen biological samples like
CC blood, urine, saliva, tissue biopsy and autopsy material in vitro for the
CC presence of Zcys8. The antibodies are also useful to isolate large

CC quantities of Zcys8 protein and DNA sequences that encode Zcys8 genes.
CC The polynucleotide encoding (I) is useful to detect and to localise the
CC expression of a Zcys8 gene in a biological sample and Zcys8
CC oligonucleotide probes are useful for in vivo diagnosis. The
CC polynucleotide encoding (I) is useful in determining whether a subject's
CC chromosomes contain a mutation in the Zcys8 gene like aneuploidy, gene
CC copy number changes, insertions, deletions, restriction site changes and
CC rearrangements and genetic alterations that inactivate the Zcys8 gene.
CC This sequence represents an antigenic peptide of human cystatin-8 (Zcys8)
XX
SQ Sequence 48 AA:

Query Match 100.0%; Score 273; DB 5; Length 48;
Best Local Similarity 100.0%; Pred. No. 4.7e-29;
Matches 48; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NVEQMWTTCCKPPTNCVPERELHKQVNCFFSVFAVPMFEQYKILNK 48
DB 1 NVEQMWTTCCKPPTNCVPERELHKQVNCFFSVFAVPMFEQYKILNK 48

RESULT 2
AAU79866
ID AAU79866 standard; peptide; 59 AA.

AC AAU79866;
XX
DT 15-JUL-2002 (first entry)
XX

DE Human cystatin-8 (Zcys8) antigenic fragment #14.

XX Cystatin-8; Zcys8; cancer; procoagulant protein; thrombosis;
KM spermatogenesis; seminal fluid viscosity; cryopreserved sperm;
KW sperm motility; fertilisation; antigenic peptide.

XX Homo sapiens.

XX WO200220567-A2.

XX 14-MAR-2002.

XX 29-AUG-2001; 2001WO-US026868.

XX 01-SEP-2000; 2000US-0230230P.

XX (ZYMO) ZYMOGENETICS INC.

XX Holloway JL, Gao Z, Bishop PD;

XX WPI; 2002-383044/41.

XX Novel isolated mammalian cystatin-8 polypeptide useful for promoting
PT spermatogenesis, and inhibiting cancer procoagulant protein which leads
PT to inhibition of thrombotic events associated with cancer.

XX Claim 2; Page 99; 100pp; English.

XX The invention describes an isolated mammalian cystatin-8 (Zcys8)
CC polypeptide (I). (I) is useful for: inhibiting cancer procoagulant
CC protein in an individual and thus inhibiting the thrombotic events
CC associated with cancer; promoting spermatogenesis, modulating seminal
CC fluid viscosity, enhancing viability of cryopreserved sperm, sperm
CC motility and fertilisation; and as antigenic peptides to generate
CC antibodies. Zcys8 is useful as research reagent for characterising sites
CC of interaction between Zcys8 and its receptor. Zcys8 is useful in
CC enhancing fertilisation during assisted reproduction in humans and in
CC animals. Anti-(I) antibodies are useful to screen biological samples like
CC blood, urine, saliva, tissue biopsy and autopsy material in vitro for the
CC presence of Zcys8. The antibodies are also useful to isolate large
CC quantities of Zcys8 protein and DNA sequences that encode Zcys8 genes.
CC The polynucleotide encoding (I) is useful to detect and to localise the
CC expression of a Zcys8 gene in a biological sample and Zcys8
CC oligonucleotide probes are useful for in vivo diagnosis. The

CC polynucleotide encoding (I) is useful in determining whether a subject's
CC chromosomes contain a mutation in the Zcys8 gene like aneuploidy, gene
CC copy number changes, insertions, deletions, restriction site changes and
CC rearrangements and genetic alterations that inactivate the Zcys8 gene.
CC This sequence represents an antigenic peptide of human cystatin-8 (Zcys8)
XX
SQ Sequence 59 AA:

Query Match 100.0%; Score 273; DB 5; Length 59;
Best Local Similarity 100.0%; Pred. No. 6e-29;
Matches 48; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NVEQMWTTCCKPPTNCVPERELHKQVNCFFSVFAVPMFEQYKILNK 48
DB 12 NVEQMWTTCCKPPTNCVPERELHKQVNCFFSVFAVPMFEQYKILNK 59

RESULT 3
AAU79865
ID AAU79865 standard; peptide; 80 AA.

AC AAU79865;

XX
DT 15-JUL-2002 (first entry)
XX

DE Human cystatin-8 (Zcys8) antigenic fragment #13.

XX Cystatin-8; Zcys8; cancer; procoagulant protein; thrombosis;
KM spermatogenesis; seminal fluid viscosity; cryopreserved sperm;
KW sperm motility; fertilisation; antigenic peptide.

XX Homo sapiens.

XX WO200220567-A2.

XX 14-MAR-2002.

XX 29-AUG-2001; 2001WO-US026868.

XX 01-SEP-2000; 2000US-0230230P.

XX (ZYMO) ZYMOGENETICS INC.

XX Holloway JL, Gao Z, Bishop PD;

XX WPI; 2002-383044/41.

XX Novel isolated mammalian cystatin-8 polypeptide useful for promoting
PT spermatogenesis, and inhibiting cancer procoagulant protein which leads
PT to inhibition of thrombotic events associated with cancer.

XX Claim 2; Page 98; 100pp; English.

XX The invention describes an isolated mammalian cystatin-8 (Zcys8)
CC polypeptide (I). (I) is useful for: inhibiting cancer procoagulant
CC protein in an individual and thus inhibiting the thrombotic events
CC associated with cancer; promoting spermatogenesis, modulating seminal
CC fluid viscosity, enhancing viability of cryopreserved sperm, sperm
CC motility and fertilisation; and as antigenic peptides to generate
CC antibodies. Zcys8 is useful as research reagent for characterising sites
CC of interaction between Zcys8 and its receptor. Zcys8 is useful in
CC enhancing fertilisation during assisted reproduction in humans and in
CC animals. Anti-(I) antibodies are useful to screen biological samples like
CC blood, urine, saliva, tissue biopsy and autopsy material in vitro for the
CC presence of Zcys8. The antibodies are also useful to isolate large
CC quantities of Zcys8 protein and DNA sequences that encode Zcys8 genes.
CC The polynucleotide encoding (I) is useful to detect and to localise the
CC expression of a Zcys8 gene in a biological sample and Zcys8
CC oligonucleotide probes are useful for in vivo diagnosis. The
CC polynucleotide encoding (I) is useful in determining whether a subject's
CC chromosomes contain a mutation in the Zcys8 gene like aneuploidy, gene
CC copy number changes, insertions, deletions, restriction site changes and
CC rearrangements and genetic alterations that inactivate the Zcys8 gene.

CC This sequence represents an antigenic peptide of human cystatin-8 (Zcys8)
 XX Sequence 80 AA:

Query Match 100.0%; Score 273; DB 5; Length 80;
 Best Local Similarity 100.0%; Pred. No. 8.5e-29;
 Matches 48; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NVEMQWTTCKPPTTNCVPORELHKQVNCFFSVFVAVPWFPEQYKILNK 48
 Db 33 NVEMQWTTCKPPTTNCVPORELHKQVNCFFSVFVAVPWFPEQYKILNK 80

RESULT 4

ID AAV79853 standard; protein; 115 AA.

AC AAV79853;

DT 15-JUL-2002 (first entry)

DE Human cystatin-8 (Zcys8) antigenic fragment #1.

KM Cystatin-8; Zcys8; cancer; procoagulant protein; thrombosis;
 KM spermatogenesis; seminal fluid viscosity; cryopreserved sperm;
 KM sperm motility; fertilisation; antigenic fragment.

OS Homo sapiens.

PN W0200220567-A2.

PD 14-MAR-2002.

PF 29-AUG-2001; 2001WO-US026868.

PR 01-SEP-2000; 2000US-0230230P.

PA (ZYMO) ZYMOGENETICS INC.

PI Holloway JL, Gao Z, Bishop PD;

DR WPI; 2002-383044/41.

PT Novel isolated mammalian cystatin-8 polypeptide useful for promoting
 PT spermatogenesis, and inhibiting cancer procoagulant protein which leads
 PT to inhibition of thrombotic events associated with cancer.

PS Claim 2; Page 94; 100pp; English.

XX The invention describes an isolated mammalian cystatin-8 (Zcys8)
 CC polypeptide (I). (I) is useful for: inhibiting cancer procoagulant
 CC protein in an individual and thus inhibiting the thrombotic events
 CC associated with cancer; promoting spermatogenesis; modulating seminal
 CC fluid viscosity; enhancing viability of cryopreserved sperm; sperm
 CC motility and fertilisation; and as antigenic peptides to generate
 CC antibodies. Zcys8 is useful as research reagent for characterising sites
 CC of interaction between Zcys8 and its receptor. Zcys8 is useful in
 CC enhancing fertilisation during assisted reproduction in humans and in
 CC animals. Anti-(I) antibodies are useful to screen biological samples like
 CC blood, urine, saliva, tissue biopsy and autopsy material in vitro for the
 CC presence of Zcys8. The antibodies are also useful to isolate large
 CC quantities of Zcys8 protein and DNA sequences that encode Zcys8 genes.
 CC The polynucleotide encoding (I) is useful to detect and to localise the
 CC expression of a Zcys8 gene in a biological sample and Zcys8
 CC oligonucleotide probes are useful for in vivo diagnosis. The
 CC polynucleotide encoding (I) is useful in determining whether a subject's
 CC chromosomes contain a mutation in the Zcys8 gene like aneuploidy, gene
 CC copy number changes, insertions, deletions, restriction site changes and
 CC rearrangements and genetic alterations that inactivate the Zcys8 gene.
 CC This sequence represents an antigenic fragment of human cystatin-8
 CC (Zcys8)

XX Sequence 115 AA;

Query Match 100.0%; Score 273; DB 5; Length 115;
 Best Local Similarity 100.0%; Pred. No. 1.3e-28;
 Matches 48; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NVEMQWTTCKPPTTNCVPORELHKQVNCFFSVFVAVPWFPEQYKILNK 48
 Db 63 NVEMQWTTCKPPTTNCVPORELHKQVNCFFSVFVAVPWFPEQYKILNK 110

RESULT 5

ID AAV79854 standard; protein; 117 AA.

AC AAV79854;

DT 15-JUL-2002 (first entry)

DE Human cystatin-8 (Zcys8) antigenic fragment #2.

KM Cystatin-8; Zcys8; cancer; procoagulant protein; thrombosis;
 KM spermatogenesis; seminal fluid viscosity; cryopreserved sperm;
 KM sperm motility; fertilisation; antigenic fragment.

OS Homo sapiens.

PN W0200220567-A2.

PD 14-MAR-2002.

PF 29-AUG-2001; 2001WO-US026868.

PR 01-SEP-2000; 2000US-0230230P.

PA (ZYMO) ZYMOGENETICS INC.

PI Holloway JL, Gao Z, Bishop PD;

DR WPI; 2002-383044/41.

PT Novel isolated mammalian cystatin-8 polypeptide useful for promoting
 PT spermatogenesis, and inhibiting cancer procoagulant protein which leads
 PT to inhibition of thrombotic events associated with cancer.

PS Claim 2; Page 94-95; 100pp; English.

XX The invention describes an isolated mammalian cystatin-8 (Zcys8)
 CC polypeptide (I). (I) is useful for: inhibiting cancer procoagulant
 CC protein in an individual and thus inhibiting the thrombotic events
 CC associated with cancer; promoting spermatogenesis; modulating seminal
 CC fluid viscosity; enhancing viability of cryopreserved sperm; sperm
 CC motility and fertilisation; and as antigenic peptides to generate
 CC antibodies. Zcys8 is useful as research reagent for characterising sites
 CC of interaction between Zcys8 and its receptor. Zcys8 is useful in
 CC enhancing fertilisation during assisted reproduction in humans and in
 CC animals. Anti-(I) antibodies are useful to screen biological samples like
 CC blood, urine, saliva, tissue biopsy and autopsy material in vitro for the
 CC presence of Zcys8. The antibodies are also useful to isolate large
 CC quantities of Zcys8 protein and DNA sequences that encode Zcys8 genes.
 CC The polynucleotide encoding (I) is useful to detect and to localise the
 CC expression of a Zcys8 gene in a biological sample and Zcys8
 CC oligonucleotide probes are useful for in vivo diagnosis. The
 CC polynucleotide encoding (I) is useful in determining whether a subject's
 CC chromosomes contain a mutation in the Zcys8 gene like aneuploidy, gene
 CC copy number changes, insertions, deletions, restriction site changes and
 CC rearrangements and genetic alterations that inactivate the Zcys8 gene.
 CC This sequence represents an antigenic fragment of human cystatin-8
 CC (Zcys8)

XX Sequence 117 AA;

XX Query Match 100.0%; Score 273; DB 5; Length 117;
 XX Best Local Similarity 100.0%; Pred. No. 1.3e-28;

Matches 48; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 NMEMQWTTCKPRTTNCVPERELHKOVNCFVSFAVFWPEQYKILNK 48
 DB 65 NMEMQWTTCKPRTTNCVPERELHKOVNCFVSFAVFWPEQYKILNK 112

RESULT 6
 AAU79852
 ID AAU79852 standard; protein; 137 AA.
 AC AAU79852;
 XX
 XX 15-JUL-2002 (first entry)
 DT
 XX
 XX Human cystatin-8 (Zcys8).
 DE
 XX Cystatin-8; Zcys8; cancer; procoagulant protein; thrombosis;
 KM spermatogenesis; seminal fluid viscosity; cryopreserved sperm;
 KW sperm motility; fertilisation.
 XX
 XX Homo sapiens.
 OS
 XX
 XX WO200220567-A2.
 PN
 XX 14-MAR-2002.
 PD
 XX 29-AUG-2001; 2001WO-US026868.
 PF
 XX 01-SEP-2000; 2000US-0230230P.
 PR
 XX (ZYMO) ZYMOGENETICS INC.
 PA
 XX Holloway JL, Gao Z, Bishop PD;
 PI
 XX WPI; 2002-383044/41.
 DR
 XX N-PDB; ABK49522.
 DR

PT Novel isolated mammalian cystatin-8 polypeptide useful for promoting
 spermatogenesis, and inhibiting cancer procoagulant protein which leads
 to inhibition of thrombotic events associated with cancer.
 PT
 XX
 XX
 XX Claim 2; Page 93-94; 100pp; English.

XX The invention describes an isolated mammalian cystatin-8 (Zcys8)
 CC polypeptide (I). (I) is useful for: inhibiting cancer procoagulant
 CC protein in an individual and thus inhibiting the thrombotic events
 CC associated with cancer; promoting spermatogenesis; modulating seminal
 CC fluid viscosity; enhancing viability of cryopreserved sperm; sperm
 CC motility and fertilisation; and as antigenic peptides to generate
 CC antibodies. Zcys8 is useful as research reagent for characterising sites
 CC of interaction between Zcys8 and its receptor. Zcys8 is useful in
 CC enhancing fertilisation during assisted reproduction in humans and in
 CC animals. Anti-(I) antibodies are useful to screen biological samples like
 CC blood, urine, saliva, tissue biopsy and autopsy material in vitro for the
 CC presence of Zcys8. The antibodies are also useful to isolate large
 CC quantities of Zcys8 protein and DNA sequences that encode Zcys8 genes.
 CC The polynucleotide encoding (I) is useful to detect and to localise the
 CC expression of a Zcys8 gene in a biological sample and Zcys8
 CC oligonucleotide probes are useful for in vivo diagnosis. The
 CC polynucleotide encoding (I) is useful in determining whether a subject's
 CC chromosomes contain a mutation in the Zcys8 gene like aneuploidy, gene
 CC copy number changes, insertions, deletions, restriction site changes and
 CC rearrangements and genetic alterations that inactivate the Zcys8 gene.
 CC This is the amino acid sequence of human cystatin-8 (Zcys8)
 CC
 XX
 XX Sequence 137 AA;
 SQ

Query Match 100.0%; Score 273; DB 5; Length 137;
 Best Local Similarity 100.0%; Pred. No. 1.6e-28;
 Matches 48; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NMEMQWTTCKPRTTNCVPERELHKOVNCFVSFAVFWPEQYKILNK 48

DB 85 NMEMQWTTCKPRTTNCVPERELHKOVNCFVSFAVFWPEQYKILNK 132
 ID AAU79862 standard; peptide; 33 AA.
 AC AAU79862;
 XX
 XX 15-JUL-2002 (first entry)
 DT
 XX
 XX Human cystatin-8 (Zcys8) antigenic fragment #10.
 DE
 XX Cystatin-8; Zcys8; cancer; procoagulant protein; thrombosis;
 KM spermatogenesis; seminal fluid viscosity; cryopreserved sperm;
 KW sperm motility; fertilisation; antigenic peptide.
 XX
 XX Homo sapiens.
 OS
 XX
 XX WO200220567-A2.
 PN
 XX 14-MAR-2002.
 PD
 XX 29-AUG-2001; 2001WO-US026868.
 PF
 XX 01-SEP-2000; 2000US-0230230P.
 PR
 XX (ZYMO) ZYMOGENETICS INC.
 PA
 XX Holloway JL, Gao Z, Bishop PD;
 PI
 XX WPI; 2002-383044/41.
 DR
 XX
 XX
 XX Claim 2; Page 97; 100pp; English.

XX The invention describes an isolated mammalian cystatin-8 (Zcys8)
 CC polypeptide (I). (I) is useful for: inhibiting cancer procoagulant
 CC protein in an individual and thus inhibiting the thrombotic events
 CC associated with cancer; promoting spermatogenesis; modulating seminal
 CC fluid viscosity; enhancing viability of cryopreserved sperm; sperm
 CC motility and fertilisation; and as antigenic peptides to generate
 CC antibodies. Zcys8 is useful as research reagent for characterising sites
 CC of interaction between Zcys8 and its receptor. Zcys8 is useful in
 CC enhancing fertilisation during assisted reproduction in humans and in
 CC animals. Anti-(I) antibodies are useful to screen biological samples like
 CC blood, urine, saliva, tissue biopsy and autopsy material in vitro for the
 CC presence of Zcys8. The antibodies are also useful to isolate large
 CC quantities of Zcys8 protein and DNA sequences that encode Zcys8 genes.
 CC The polynucleotide encoding (I) is useful to detect and to localise the
 CC expression of a Zcys8 gene in a biological sample and Zcys8
 CC oligonucleotide probes are useful for in vivo diagnosis. The
 CC polynucleotide encoding (I) is useful in determining whether a subject's
 CC chromosomes contain a mutation in the Zcys8 gene like aneuploidy, gene
 CC copy number changes, insertions, deletions, restriction site changes and
 CC rearrangements and genetic alterations that inactivate the Zcys8 gene.
 CC This sequence represents an antigenic peptide of human cystatin-8 (Zcys8)
 CC
 XX
 XX Sequence 33 AA;
 SQ

Query Match 48.7%; Score 133; DB 5; Length 33;
 Best Local Similarity 100.0%; Pred. No. 1.9e-10;
 Matches 23; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NMEMQWTTCKPRTTNCVPERE 23
 DB 11 NMEMQWTTCKPRTTNCVPERE 33

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RESULT 8
AAU79864
ID AAU79864 standard; peptide: 52 AA.
XX
AC AAU79864;
XX
DT 15-JUL-2002 (first entry)
XX
DE Human cystatin-8 (Zcys8) antigenic fragment #12.
XX
XX Cystatin-8; Zcys8; cancer; procoagulant protein; thrombosis;
KM spermatogenesis; seminal fluid viscosity; cryopreserved sperm;
KM sperm motility; fertilisation; antigenic peptide.
XX
OS Homo sapiens.
XX
PN WO200220567-A2.
XX
PD 14-MAR-2002.
XX
PF 29-AUG-2001; 2001WO-US026868.
XX
PR 01-SEP-2000; 2000US-0230230P.
XX
PA (ZYMO ) ZYMOGENETICS INC.
XX
PI Holloway JL, Gao Z, Bishop PD;
XX
DR WPI; 2002-383044/41.
XX
PT Novel isolated mammalian cystatin-8 polypeptide useful for promoting
PT spermatogenesis, and inhibiting cancer procoagulant protein which leads
PT to inhibition of thrombotic events associated with cancer.
XX
PS Claim 2; Page 98; 100pp; English.
XX
CC The invention describes an isolated mammalian cystatin-8 (Zcys8)
CC polypeptide (I). (I) is useful for: inhibiting cancer procoagulant
CC protein in an individual and thus inhibiting the thrombotic events
CC associated with cancer; promoting spermatogenesis; modulating seminal
CC fluid viscosity; enhancing viability of cryopreserved sperm; sperm
CC motility and fertilisation; and as antigenic peptides to generate
CC antibodies. Zcys8 is useful as research reagent for characterising sites
CC of interaction between Zcys8 and its receptor. Zcys8 is useful in
CC enhancing fertilisation during assisted reproduction in humans and in
CC animals. Anti-(I) antibodies are useful to screen biological samples like
CC blood, urine, saliva, tissue biopsy and autopsy material in vitro for the
CC presence of Zcys8. The antibodies are also useful to isolate large
CC quantities of Zcys8 protein and DNA sequences that encode Zcys8 genes.
CC The polynucleotide encoding (I) is useful to detect and to localise the
CC expression of a Zcys8 gene in a biological sample and Zcys8
CC oligonucleotide probes are useful for in vivo diagnosis. The
CC polynucleotide encoding (I) is useful in determining whether a subject's
CC chromosomes contain a mutation in the Zcys8 gene like aneuploidy, gene
CC copy number changes, insertions, deletions, restriction site changes and
CC rearrangements and genetic alterations that inactivate the Zcys8 gene.
CC This sequence represents an antigenic peptide of human cystatin-8 (Zcys8)
XX
SQ Sequence 52 AA;

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AC AAE02404;
XX
XX 10-AUG-2001 (first entry)
XX
DE Murine cystatin-related epididymal specific protein (CRES).
XX
XX Murine; cystatin T; zcys3; cystatin-related epididymal specific protein;
KM CRES; inhibitor; cysteine proteinase; male reproductive tissue; testis;
KM spermatogenesis; therapy; reproductive disorder.
XX
OS Mus musculus.
XX
PN US6235708-B1.
XX
PD 22-MAY-2001.
XX
PF 01-NOV-1999; 99US-00431480.
XX
PR 20-NOV-1998; 98US-0109217P.
XX
PR 28-SEP-1999; 99US-0156382P.
XX
PA (ZYMO ) ZYMOGENETICS INC.
XX
PI Holloway JL, Feldhaue AL;
XX
DR WPI; 2001-342846/36.
XX
PT Cystatin T polypeptides are useful for modulating spermatogenesis and
PT studying, diagnosing and treating reproductive disorders.
XX
XX Disclosure; Col 45-46; 32pp; English.
XX
PS The present invention relates to cystatin T (also known as zcys3) DNA and
CC protein sequences. Cystatin T is testis specific and is homologous to
CC cystatin-related epididymal specific gene (CRES) and type 2 cystatins.
CC Cystatin inhibit cysteine proteinases and are found with male
CC reproductive tissues and secretions. Cystatin T sequence is useful for
CC modulating spermatogenesis and studying, diagnosing and treating for
CC reproductive disorders. The present sequence is murine cystatin-related
CC epididymal specific (CRES) protein
XX
SQ Sequence 142 AA;

```

Query Match 39.4%; Score 107.5; DB 4; Length 142;
 Best Local Similarity 39.2%; Pred. No. 2.7e-06;
 Matches 20; Conservative 16; Mismatches 12; Indels 3; Gaps 2;

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OY 1 NVEWQWTTCKP--ETTCVPOER-BLHKQVCPFSVFAVPMFROYKILNK 48
DB 87 DVOISRSNCKKPLANTNCIPQKKPELEKQKSCFLVGALPMNGEPNLSK 137

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RESULT 10
AAE04433
ID AAE04433 standard; protein: 142 AA.
XX
AC AAE04433;
XX
DT 04-SEP-2001 (first entry)
XX
DE Mouse cystatin-related epididymal specific (CRES) protein.
XX
XX Mouse; cystatin T; zcys3; testis specific; spermatogenesis modulator;
KM cystatin-related epididymal specific gene; CRES; gene therapy;
KM sperm production; antiinfertility.
XX
OS Mus musculus.
XX
PN US6245529-B1.
XX
PN 12-JUN-2001.
XX
PD 17-JUL-2000; 2000US-00617302.
XX

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XX    20-NOV-1998;      98US-0109217P.
PR    28-SEP-1999;     98US-0156382P.
PR    01-NOV-1999;     99US-00431460.
XX
XX    (ZYMO ) ZYMOGENETICS INC.
PI    Holloway JL, Feldhaus AL;
DR    WPI; 2001-407271/43.
XX
XX    New polynucleotides encoding testis-specific cystatin-like protein
PT    cystatin T, useful in gene therapy for modulating cystatin T activity,
PT    particularly for modulating spermatogenesis, or enhancing sperm
PT    production or fertility.
XX
PS    Disclosure; Col 47-48; 33pp; English.
XX
XX    The present sequence is mouse cystatin-related epididymal specific (CRES)
CC    protein which is homologous to mouse testis specific cystatin T (also
CC    known as zcys3). The cystatin T polynucleotide is useful in gene therapy
CC    applications, where it is desired to increase or inhibit cystatin T
CC    activity. It is also useful for producing cystatin T polypeptide, as well
CC    as for detecting the expression of a cystatin T gene in a biological
CC    sample. The cystatin T is useful for modulating spermatogenesis, and may
CC    be used to study or modulate that function in in vitro or in vivo
CC    systems. In particular, it is also useful for enhancing sperm production,
CC    increasing the number of viable sperm in a sample, or enhancing
CC    fertilisation
XX
SQ    Sequence 142 AA;
XX
Query Match          39.4%; Score 107.5; DB 4; Length 142;
Best Local Similarity 39.2%; Pred. No. 2.7e-06;
Matches 20; Conservative 16; Mismatches 12; Indels 3; Gaps 2;
XX
QY      1 NVEWQMTTCCKP--ETTNCVPOER-ELIKOVNCFESVFAPVMFEGYKTLNK 48
       |:|::|||:|||::|||::|||::|||::|||::|||::|||::|||::|||
DB      87 DVQISRSNCKPKPLNTTENCIPQKKPELTKRKSCSFLVALPWNGEFNLISK 137
XX
RESULT 11
ID      ADAI4374 standard; protein, 143 AA.
XX
XX      ADAI4374;
XX
DT      06-NOV-2003 (first entry)
XX
DE      Mouse spermatogenesis related protein sequence SEQ ID NO:116.
XX
KW      mouse; spermatogenesis; gene cluster; mutagenicity;
KW      reproductive toxicity; reproductive capacity; mutation;
KW      expression abnormality; human male sterility associated gene; scot-t;
KW      succinyl CoA:3-oxo acid CoA transferase; human male sterility.
XX
OS      Mus musculus.
XX
PN      WO200306969-A1.
XX
PD      21-AUG-2003.
XX
PF      14-FEB-2003; 2003WO-JP001572.
PP      14-FEB-2002; 2002JP-00036649.
PR      27-DEC-2002; 2002JP-00381241.
XX
PA      (NISC-) JAPAN SCI & TECHNOLOGY CORP.
XX
PI      Nishimune Y, Tanaka H, Nozaki M;
XX
WI      2003-671663/63.
XX
N-PSDB; ADAI4477.

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	XX	Mouse spermatogenesis gene cluster and human male sterility associated genes; useful for diagnosis of human male sterility and testing substances for reproductive toxicity.
Pt	PT	Claim 6; Page 155; 262pp; Japanese.
Xx	PS	The present invention describes a mouse spermatogenesis gene cluster containing 89 genes (see the cDNA sequences of ADAl4442 to ADAl4510).
Cc	CC	Also described: (1) a cDNA library containing cDNA encoding the gene cluster; (2) oligonucleotides of 10-99 bases containing partial sequences of genes of the cluster; (3) microarrays containing these oligonucleotides; (4) primer sets for PCR amplification of cDNA or genomic DNA for genes of the cluster; (5) polypeptides encoded by the genes in the cluster; (6) antibodies to these polypeptides; (7) a method for testing the mutagenicity and reproductive capacity of a test substance, and assessment of the reproduction abnormalities of genes individual, by analysis of mutation and expression abnormalities of the genes in the cluster; (8) polynucleotides which are mutations of the human male sterility associated gene scot-t (uncinyl CoA:3-oxo acid CoA transferase gene) having one or more of the following specific mutations: T129C, T870G, C1071T, T1657C; (9) oligonucleotides containing partial sequences of human scot-t including one or more of the above mutations; (10) primer sets for PCR amplification of mRNA derived from the mutant scot-t gene; (11) polypeptides encoded by human scot-t gene and having one or more of the mutations Leu38Pro, Leu285Arg, Thr352Met; (12) polynucleotides which are mutations of the human male sterility associated gene protamine2, having C248T; (13) polypeptides encoded by this mutant protamine2 gene; (14) antibodies (including labelled antibodies) to these polypeptides; (15) a method for determining the presence or absence of these mutant polynucleotides in genomic DNA; (16) diagnosis of human male sterility using this method; (17) DNA probes containing sequences of these mutant polynucleotides; and (18) DNA chip containing sequences derived from these mutant polynucleotides. The methods of the present invention can be used in the diagnosis of human male sterility; testing the reproductive toxicity and mutagenicity of substances; and assessing the reproductive capacity of individuals. The present sequence represents a mouse spermato-genesis related protein, which is encoded by a cDNA sequence from the mouse spermatogenesis gene cluster.
SQ	Sequence 143 AA;	
Oy	Query Match	39.4%; Score 107.5; DB 6; Length 143;
Dd	Best Local Similarity	39.2%; Pred. No. 2,7e-06;
	Matches	20; Conservative 16; Mismatches 12; Indels 3; Gaps 2;
	Db	1 NVEWOMTTCKP--ETTNVCPOER-EIAKOVNCFPSVFAVPWFQYKLINLK 48 ::: :: :: :: :: : 87 DVQLSRBNCKPLANTENCIPKKPELEBKMGCSFLVGALPMNGEPULSK 137
RSLUTL 12	ID	ADD46708 standard; protein; 142 AA.
AC	AA	ADD46708;
XX	DT	29-JAN-2004 (first entry)
DE	DE	Rat Protein AAC36317, SEQ ID NO 12393.
XX	XX	Rat; pain; neuronal tissue; gene therapy; spinal segmental nerve injury; chronic constriction injury;CCI, spared nerve injury; SNI; Chung. Rattus norvegicus.
OS	WO2003016475-A2.	
FN	PD	27-FEB-2003.
PP	PF	14-AUG-2002; 2002MO-USO25765.
PR	PR	14-AUG-2001; 2001US-0312147P.

XX 14-AUG-2002; 2002WO-US025765.
PF
XX
XX 14-AUG-2001; 2001US-0312147P.
XX PR 01-NOV-2001; 2001US-0346382P.
XX PR 26-NOV-2001; 2001US-0333347P.
XX
PA (GENO) GEN HOSPITAL CORP.
PA (FARB) BAYER AG.
XX
XX
PI Woolf C, D'urso D, Befort K, Costigan M;
XX
XX MPI: 2003-268312/26.
DR
XX GENBANK; AAC36317.
DR
XX
XX
XX New composition comprising two or more isolated polypeptides, useful for
PT preparing a medicament for treating pain in an animal.
PT
XX
XX Claim 1, Page: 1017bp, English.
XX
XX
XX The invention discloses a composition comprising two or more isolated rat
CC or human polynucleotides or a polynucleotide which represents a fragment,
CC derivative or allelic variation of the nucleic acid sequence. Also
CC claimed are a vector comprising the novel polynucleotide, a host cell
CC comprising the vector, a method for identifying a nucleotide sequence
CC which is differentially regulated in an animal subjected to pain and a
CC kit to perform the method, an array, a method for identifying an agent
CC that increases or decreases the expression of the polynucleotide sequence
CC that is differentially expressed in neuronal tissue of a first animal
CC subjected to pain, a method for identifying a compound which regulates
CC the expression of a polynucleotide sequence which is differentially
CC expressed in an animal subjected to pain, a method for identifying a
CC compound that regulates the activity of one or more of the
CC polynucleotides, a method for producing a pharmaceutical composition, a
CC method for identifying a compound or small molecule that regulates the
CC activity in an animal of one or more of the polypeptides given in the
CC specification, a method for identifying a compound useful in treating
CC pain and a pharmaceutical composition comprising the one or more
CC polypeptides or their antibodies. The polynucleotide or the compound that
CC modulates its activity is useful for preparing a medicament for treating
CC pain (e.g. spinal segmental nerve injury (Chung), chronic constriction
CC injury (CCI) and spared nerve injury (SNI)) in an animal (e.g. gene
CC therapy). The sequence presented is a rat protein (shown in Table 2 of
CC the specification) which is differentially expressed during pain. Note:
CC The sequence data for this patent did not form part of the printed
CC specification, but was obtained in electronic form directly from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences.
XX
XX
SQ Sequence 142 AA;

Query Match 36.8%; Score 100.5; DB 7; Length 142;
Best Local Similarity 37.3%; Pred. No. 2,3e-05;
Matches 19; Conservative 16; Mismatches 13; Indels 3; Gaps 2;

OY 1 NVEQMWTTCQKP--ETTNCVPOER-BLHKQVNCFFSVPAVPWEQYKILNK 48
::: :|:|:| :|:|:| :|:|:| :|:|:| :|:|:| :|:|:| :|:|:|
DB 87 DVQISRNCRKPLNNTENCIPQKNPKLEKKLSCFLVGLGALPMNGEFDLPSK 137

RESULT 14
AAU09877
ID AAU09877 standard; protein; 148 AA.
XX
XX AAU09877;
XX
XX 26-FEB-2002 (first entry)
XX
XX Novel human secreted protein #18.
XX
XX Secreted protein; cytostatic; immunosuppressive; vulnery; vaccine;
XX antinflammatory; neuroprotective; nephrotoxic; cardiovascular; human;
XX cancer; autoimmune disease; wound healing disorder; infection;
XX haematopoietic disorder; inflammatory disorder; infertility;
XX

KM neurological disease; psychiatric disease; cardiovascular disease;
 KM respiratory disease; renal; gastrointestinal.
 XX Homo sapiens.
 OS
 XX WO200179454-A1.
 PN
 XX 25-OCT-2001.
 PD
 XX 11-APR-2001; 2001WO-US011797.
 PF
 XX 13-APR-2000; 2000US-0196603P.
 PR 24-APR-2000; 2000US-0199417P.
 XX
 XX (SMIK) SMITHKLINE BEECHAM CORP.
 PA (SMIK) SMITHKLINE BEECHAM PLC.
 PI Agarwal P, Murdoch PR, Rizvi SK, Smith RF, Xiang Z;
 XX WPI; 2002-061975/08.
 DR N-PSDB; AAS17589.
 XX
 PT New secreted proteins or polypeptides, useful for treating e.g. cancer,
 PT autoimmune diseases, wound healing disorder, infections, hematopoietic
 PT disorders, inflammatory disorders, infertility, cancer.
 PS
 XX Claim 1; Page 79-80; 92pp; English.
 CC The invention relates to an isolated novel secreted polypeptide (I) and
 CC polynucleotide (II). (I) and (II) are useful for treating cancer,
 CC autoimmune diseases, wound healing disorder, infections, hematopoietic
 CC disorders, inflammatory disorders, infertility, neurological and
 CC psychiatric diseases, cardiovascular diseases, respiratory diseases,
 CC renal diseases, or gastrointestinal diseases. These may also be used to
 CC treat diseases, abnormalities and disorders caused by abnormal
 CC expression, production, function and/or metabolism of the genes, as
 CC vaccines for inducing immunological response in a mammal, and in
 CC screening methods for detecting the effect of added compounds on the
 CC production of mRNA and polypeptide in cells. The polypeptides can be used
 CC as immunogens to produce antibodies immunospecific for the polypeptides,
 CC and to identify membrane-bound or soluble receptors. The polynucleotides
 CC may be used as diagnostic reagents, in chromosome localisation studies,
 CC and in tissue expression studies. The present sequence represents the
 CC amino acid sequence of novel human secreted protein #18
 CC
 XX
 SQ Sequence 148 AA;
 Query Match 35.0%; Score 95.5; DB 5; Length 148;
 Best Local Similarity 37.3%; Pred. No. 0.00011;
 Matches 19; Conservative 11; Mismatches 18; Indels 3; Gaps 2;
 OY 1 NVEQMWTTCCK--PETTNVQPOER-ELHKQVNCFFSVFAVWFROYKILNK 48
 DB 91 NLQRLQTVCKRKFDDINDNCPQESLEJLNTFTCTFTSTRPMWTFSLNK 141
 RESULT 15
 ID AAU79860 standard; peptide; 46 AA.
 AC AAU79860;
 XX
 DT 15-JUL-2002 (first entry)
 XX
 DE Human cystatin-8 (Zcys8) antigenic fragment #8.
 XX
 XX Cystatin-8; Zcys8; cancer; procogulant protein; thrombosis;
 KM spermatogenesis; seminal fluid viscosity; cryopreserved sperm;
 KM sperm motility; fertilisation; antigenic peptide.
 XX Homo sapiens.
 OS
 XX WO200220567-A2.
 PN

XX 14-MAR-2002.
 PD
 XX 29-AUG-2001; 2001WO-US026868.
 PF
 XX 01-SEP-2000; 2000US-0230230P.
 PR
 XX (ZYMO) ZYMOGENETICS INC.
 PA
 XX Holloway JL, Gao Z, Bishop PD;
 PI
 XX WPI; 2002-383044/41.
 DR
 XX
 PT Novel isolated mammalian cystatin-8 polypeptide useful for promoting
 PT spermatogenesis, and inhibiting cancer procogulant protein which leads
 PT to inhibition of thrombotic events associated with cancer.
 PS
 XX Claim 2; Page 97; 100pp; English.
 CC The invention describes an isolated mammalian cystatin-8 (Zcys8)
 CC polypeptide (I). (I) is useful for: inhibiting cancer procogulant
 CC protein in an individual and thus inhibiting the thrombotic events
 CC associated with cancer; promoting spermatogenesis, modulating seminal
 CC fluid viscosity, enhancing viability of cryopreserved sperm, sperm
 CC motility and fertilisation; and as antigenic peptides to generate
 CC antibodies. Zcys8 is useful as research reagent for characterising sites
 CC of interaction between Zcys8 and its receptor. Zcys8 is useful in
 CC enhancing fertilisation during assisted reproduction in humans and in
 CC animals. Anti-(I) antibodies are useful to screen biological samples like
 CC blood, urine, saliva, tissue biopsy and autopsy material in vitro for the
 CC presence of Zcys8. The antibodies are also useful to isolate large
 CC quantities of Zcys8 protein and DNA sequences that encode Zcys8 genes.
 CC The polynucleotide encoding (I) is useful to detect and to localise the
 CC expression of a Zcys8 gene in a biological sample and Zcys8
 CC oligonucleotide probes are useful for in vivo diagnosis. The
 CC polynucleotide encoding (I) is useful in determining whether a subject's
 CC chromosomes contain a mutation in the Zcys8 gene like aneuploidy, gene
 CC copy number changes, insertions, deletions, restriction site changes and
 CC rearrangements and genetic alterations that inactivate the Zcys8 gene.
 CC This sequence represents an antigenic peptide of human cystatin-8 (Zcys8)
 CC
 XX
 SQ Sequence 46 AA;
 Query Match 34.1%; Score 93; DB 5; Length 46;
 Best Local Similarity 100.0%; Pred. No. 6.6e-05;
 Matches 16; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 OY 1 NVEQMWTTCCKPEPTN 16
 DB 31 NVEQMWTTCCKPEPTN 46
 Search completed: March 23, 2004, 17:10:28
 Job time : 38.3539 secs

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: March 23, 2004, 17:07:14 ; Search time 10.6444 Seconds

(without alignments)
232,804 Million cell updates/sec

Title: US-09-941-314-17

Perfect score: 273
Sequence: 1 NVEMQMTTCKPRTNVCVPO.....NCFPSVFAVPWFQYKILNK 48Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 389414 seqs, 51625971 residues

Total number of hits satisfying chosen parameters: 389414

Minimum DB seq length: 0
Maximum DB seq length: 200000000Post-processing: Minimum Match 0%
Maximum Match 100%

Listing first 45 summaries

Database : Issued Patents AA:*
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4: /cgn2_6/ptodata/2/iaa/6B_COMB.pep:*
5: /cgn2_6/ptodata/2/iaa/PCFUS_COMB.pep:*
6: /cgn2_6/ptodata/2/iaa/backfile1.pep:*

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	107.5	39.4	142	3	US-09-431-480-3
2	107.5	39.4	142	3	US-09-617-302-3
3	85.5	31.3	142	3	US-09-431-480-4
4	85.5	31.3	142	3	US-09-617-302-4
5	80.5	29.5	96	4	US-09-489-847-334
6	80.5	29.5	148	4	US-09-489-847-187
7	80.5	29.5	166	4	US-09-489-847-335
8	79.5	29.1	115	4	US-09-775-932-16
9	79.5	29.1	139	2	US-08-791-522-4
10	79.5	29.1	139	3	US-09-314-777-4
11	79.5	29.1	139	4	US-08-849-303-15
12	78.5	28.8	127	4	US-08-849-303-19
13	76	27.8	146	6	5432264-6
14	75.5	27.7	121	4	US-09-775-932-4
15	75.5	27.7	141	3	US-08-744-138-5
16	75.5	27.7	141	3	US-09-431-480-11
17	75.5	27.7	141	3	US-09-617-302-11
18	75.5	27.7	141	3	US-09-241-376-5
19	75.5	27.7	141	4	US-09-940-497-5
20	75.5	27.7	141	4	US-08-849-303-22
21	74.5	27.3	121	4	US-09-775-932-8
22	74.5	27.3	141	3	US-08-744-138-6
23	74.5	27.3	141	4	US-09-241-376-6
24	74.5	27.3	141	4	US-09-940-497-6
25	74.5	27.3	141	4	US-08-849-303-24
26	73.5	26.9	120	4	US-09-775-932-2
27	73.5	26.9	120	6	5432264-4

28	73.5	26.9	122	4	US-09-775-932-10	Sequence 10, Appl
29	73.5	26.9	140	3	US-09-431-480-5	Sequence 5, Appl
30	73.5	26.9	140	3	US-09-617-302-5	Sequence 5, Appl
31	73.5	26.9	140	4	US-09-886-319A-46	Sequence 46, Appl
32	73.5	26.9	140	4	US-09-886-319A-48	Sequence 48, Appl
33	73.5	26.9	140	4	US-08-849-303-18	Sequence 18, Appl
34	73.5	26.9	142	3	US-08-744-138-4	Sequence 4, Appl
35	73.5	26.9	142	3	US-09-431-480-7	Sequence 7, Appl
36	73.5	26.9	142	3	US-09-617-302-7	Sequence 7, Appl
37	73.5	26.9	142	4	US-09-241-376-4	Sequence 4, Appl
38	73.5	26.9	142	4	US-09-940-497-4	Sequence 4, Appl
39	73.5	26.9	142	4	US-09-976-594-358	Sequence 38, Appl
40	73.5	26.9	142	4	US-08-849-303-20	Sequence 20, Appl
41	73.5	26.9	145	2	US-08-832-535-11	Sequence 11, Appl
42	73.5	26.9	146	2	US-08-791-522-3	Sequence 3, Appl
43	73.5	26.9	146	3	US-08-744-138-3	Sequence 3, Appl
44	73.5	26.9	146	3	US-09-019-485-4	Sequence 4, Appl
45	73.5	26.9	146	3	US-09-314-777-3	Sequence 3, Appl

ALIGNMENTS

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RESULT 1
US-09-431-480-3
Sequence 3, Application US/09431480
Patent No. 6235708
GENERAL INFORMATION:
APPLICANT: Holloway, James L.
TITLE OF INVENTION: TESTIS SPECIFIC CYSTATIN-LIKE PROTEIN CYSTATIN T
FILE REFERENCE: 98-72
CURRENT APPLICATION NUMBER: US/09/431,480
EARLIER FILING DATE: 1999-11-01
EARLIER APPLICATION NUMBER: 60/109,217
EARLIER FILING DATE: 1998-11-20
EARLIER APPLICATION NUMBER: 60/156,382
NUMBER OF SEQ ID NOS: 22
SOFTWARE: FastSeq for Windows Version 3.0
SEQ ID NO 3
LENGTH: 142
TYPE: PRT
ORGANISM: Mus musculus
US-09-431-480-3

Query Match          39.4%; Score 107.5; DB 3; Length 142;
Best Local Similarity 39.2%; Pred. No. 1.8e-07;
Matches 20; Conservative 16; Mismatches 12; Indels 3; Gaps 2;

QY      1 NVEMQMTTCKP--ETTNCVPOER-ELHKOVNCFPSVFAVPWFQYKILNK 48
      ::::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|
Db      87 DVQSRNCKKPLINTENCIPQKKPELEKTKMSCFVLGALPMNGEFLILSK 137

RESULT 2.
US-09-617-302-3
Sequence 3, Application US/09617302
Patent No. 6245529
GENERAL INFORMATION:
APPLICANT: Holloway, James L.
TITLE OF INVENTION: TESTIS SPECIFIC CYSTATIN-LIKE PROTEIN CYSTATIN T
FILE REFERENCE: 98-72 C1
CURRENT APPLICATION NUMBER: US/09/617,302
CURRENT FILING DATE: 2000-07-17
PRIOR APPLICATION NUMBER: 09/431,480
PRIOR FILING DATE: 1999-11-01
PRIOR APPLICATION NUMBER: 60/109,217
PRIOR FILING DATE: 1998-11-20
PRIOR APPLICATION NUMBER: 60/156,382
PRIOR FILING DATE: 1999-09-28
NUMBER OF SEQ ID NOS: 22
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RESULT 4
US-09-617-302-4
Sequence 4, Application US/09617302
Patent No. 6245529
GENERAL INFORMATION:
APPLICANT: Holloway, James L.
APPLICANT: Feldhaus, Andrew
TITLE OF INVENTION: TESTIS SPECIFIC CYSTR
FILE REFERENCE: 98-72 C1
CURRENT APPLICATION NUMBER: US/09/617,302
CURRENT FILING DATE: 2000-07-17
PRIOR APPLICATION NUMBER: 09/431,480
PRIOR FILING DATE: 1999-11-01
PRIOR APPLICATION NUMBER: 60/109,217
PRIOR FILING DATE: 1998-11-20
PRIOR APPLICATION NUMBER: 60/156,382
PRIOR FILING DATE: 1999-09-28
NUMBER OF SEQ ID NOS: 22
SOFTWARE: FastSeq for Windows Version 3.0.0
SEQ ID NO 4
LENGTH: 142
TYPE: PRT
ORGANISM: Homo sapiens
US-09-617-302-4

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/ RESULT 6
/ US-09-489-847-187
/ Sequence 187, Application US/09489847
/ Patent No. 6476195
/ GENERAL INFORMATION:
/ APPLICANT: Rosen et al
/ TITLE OF INVENTION: 98 Human Secreted Proteins.
/ FILE REFERENCE: P203JP1
/ CURRENT APPLICATION NUMBER: US/09/489,847
/ CURRENT FILING DATE: 2000-01-24
/ EARLIER APPLICATION NUMBER: PCT/US99/17130
/ EARLIER FILING DATE: 1999-07-29
/ EARLIER APPLICATION NUMBER: 60/094,657
/ EARLIER FILING DATE: 1998-07-30
/ EARLIER APPLICATION NUMBER: 60/095,486
/ EARLIER FILING DATE: 1998-08-05
/ EARLIER APPLICATION NUMBER: 60/096,319
/ EARLIER FILING DATE: 1998-08-12
/ EARLIER APPLICATION NUMBER: 60/095,454
/ EARLIER FILING DATE: 1998-08-06
/ EARLIER APPLICATION NUMBER: 60/095,455
/ EARLIER FILING DATE: 1998-08-06
/ NUMBER OF SEQ ID NOS: 376
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 187

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LENGTH: 148
TYPE: PRT
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: SITE
LOCATION: (148)
OTHER INFORMATION: Xaa equals stop translation
US-09-489-847-187

Query Match 29.5%; Score 80.5; DB 4; Length 148;
Best Local Similarity 40.0%; Pred. No. 0.0012;
Matches 18; Conservative 6; Mismatches 18; Indels 3; Gaps 2;

Qy 7 TTCC--PETTNCVPOE-REHLKQVNCFFSVFVAVWPFQYKILK 48
Db 96 TRCGKEDDIDNCHFGESTELNMTFTCTFTSTPRMTQPSLANK 140

RESULT 7
US-09-489-847-335
Sequence 335, Application US/09489847
Patent No. 6476195
GENERAL INFORMATION:
APPLICANT: Rosen et al
TITLE OF INVENTION: 98 Human Secreted Proteins
FILE REFERENCE: P2031P1
CURRENT APPLICATION NUMBER: US/09/489,847
CURRENT FILING DATE: 2000-01-24
EARLIER APPLICATION NUMBER: PCT/US99/17130
EARLIER FILING DATE: 1999-07-29
EARLIER APPLICATION NUMBER: 60/094,657
EARLIER FILING DATE: 1998-07-30
EARLIER APPLICATION NUMBER: 60/095,486
EARLIER FILING DATE: 1998-08-05
EARLIER APPLICATION NUMBER: 60/096,319
EARLIER FILING DATE: 1998-08-12
EARLIER APPLICATION NUMBER: 60/095,454
EARLIER FILING DATE: 1998-08-06
EARLIER APPLICATION NUMBER: 60/095,455
EARLIER FILING DATE: 1998-08-06
NUMBER OF SEQ ID NOS: 376
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 335
LENGTH: 166
TYPE: PRT
ORGANISM: Homo sapiens
US-09-489-847-335

Query Match 29.5%; Score 80.5; DB 4; Length 166;
Best Local Similarity 40.0%; Pred. No. 0.0013;
Matches 18; Conservative 6; Mismatches 18; Indels 3; Gaps 2;

Qy 7 TTCC--PETTNCVPOE-REHLKQVNCFFSVFVAVWPFQYKILK 48
Db 115 TRCGKEDDIDNCHFGESTELNMTFTCTFTSTPRMTQPSLANK 159

RESULT 8
US-09-775-932-16
Sequence 16, Application US/09775932
Patent No. 6534477
GENERAL INFORMATION:
APPLICANT: University of British Columbia
TITLE OF INVENTION: Production and use of Modified Cystatins
FILE REFERENCE: 58069
CURRENT APPLICATION NUMBER: US/09/775,932
CURRENT FILING DATE: 2001-02-02
PRIOR APPLICATION NUMBER: CA99/00717
PRIOR FILING DATE: 1999-08-05
PRIOR APPLICATION NUMBER: 60/095,503
PRIOR FILING DATE: 1998-08-05
NUMBER OF SEQ ID NOS: 32
SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 16
LENGTH: 116
TYPE: PRT
ORGANISM: Gallus sp.
US-09-775-932-16

Query Match 29.1%; Score 79.5; DB 4; Length 116;
Best Local Similarity 37.5%; Pred. No. 0.0012;
Matches 18; Conservative 8; Mismatches 19; Indels 3; Gaps 2;

Qy 2 VENQMTTCQKP--ETTNC-VPOERELHKNVNCFFSVFVAVWPFQYKIL 46
Db 64 VEIGRTTCPSKSGDLOSCEFHDPEPMAYKTTCTFVVISIPWLNQIKLL 111

RESULT 9
US-08-791-522-4
Sequence 4, Application US/08791522
Patent No. 5935817
GENERAL INFORMATION:
APPLICANT: Bandman, Olga
TITLE OF INVENTION: NOVEL HUMAN CYSTATIN-LIKE
TITLE OF INVENTION: PROTEIN
NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
ADDRESSEE: Incyte Pharmaceuticals, Inc.
STREET: 3174 Porter Drive
CITY: Palo Alto
STATE: CA
COUNTRY: USA
ZIP: 94304

COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEO for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/791,522
FILING DATE: Filed Herewith
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: Billings, Lucy J.
REGISTRATION NUMBER: 36,749
REFERENCE/DOCKET NUMBER: PF-0193 US
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-855-0555
TELEFAX: 415-845-4166
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 139 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
IMMEDIATE SOURCE:
LIBRARY: GenBank
CLONE: 118195
US-08-791-522-4

Query Match 29.1%; Score 79.5; DB 2; Length 139;
Best Local Similarity 37.5%; Pred. No. 0.0015;
Matches 18; Conservative 8; Mismatches 19; Indels 3; Gaps 2;

Qy 2 VENQMTTCQKP--ETTNC-VPOERELHKNVNCFFSVFVAVWPFQYKIL 46
Db 87 VEIGRTTCPSKSGDLOSCEFHDPEPMAYKTTCTFVVISIPWLNQIKLL 134

RESULT 10
US-09-314-777-4

Sequence 4, Application US/09314777
Patent No. 6110686
GENERAL INFORMATION:
APPLICANT: Bandman, Olga
APPLICANT: Goll, Surya K.
TITLE OF INVENTION: NOVEL HUMAN CYSTATIN-LIKE
TITLE OF INVENTION: PROTEIN
NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
ADDRESSEE: Incyte Pharmaceuticals, Inc.
STREET: 3174 Porter Drive
CITY: Palo Alto
STATE: CA
COUNTRY: USA
ZIP: 94304
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSeq for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/314,777
FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/791,522
FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: Billings, Lucy J.
REGISTRATION NUMBER: 36,749
REFERENCE/DOCKET NUMBER: PP-0193 US
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-855-0555
TELEFAX: 415-845-4166
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 139 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
IMMEDIATE SOURCE:
LIBRARY: Genbank
CLONE: 118195
US-09-314-777-4

Query Match 29.1%; Score 79.5; DB 3; Length 139;
Best Local Similarity 37.5%; Pred. No. 0.0015;
Matches 18; Conservative 8; Mismatches 19; Indels 3; Gaps 2;

QY 2 VEMQWTTCKRP--ETTNC-VPOERELHKQVNCFFSVAVPWFQYKIL 46
DB 87 VEIGRTTCPKSSGDLQSCFHPDEPMAXYTTCTFVVVSIPLNQLIKLL 134

RESULT 11
US-08-849-303-15
Sequence 15, Application US/08849303
Patent No. 6680424
GENERAL INFORMATION:
APPLICANT: Atkinson, Howard J.
APPLICANT: McPherson, Michael J.
APPLICANT: Urvain, Peter E.
TITLE OF INVENTION: MODIFIED PROTEINASE INHIBITORS
NUMBER OF SEQUENCES: 79
CORRESPONDENCE ADDRESS:
ADDRESSEE: Klauber & Jackson
STREET: 411 Hackensack Avenue, 4th Floor
CITY: Hackensack
STATE: New Jersey
COUNTRY: USA
ZIP: 07601
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/849,303
FILING DATE: 21-MAY-1997
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: Jackson Esq., David A.
REGISTRATION NUMBER: 26,742
REFERENCE/DOCKET NUMBER: 1321-1-003
TELECOMMUNICATION INFORMATION:
TELEPHONE: 201-487-5800
TELEFAX: 201-343-1684
TELEX: 133521
INFORMATION FOR SEQ ID NO: 15:
SEQUENCE CHARACTERISTICS:
LENGTH: 139 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
HYPOTHETICAL: NO
US-08-849-303-15

Query Match 29.1%; Score 79.5; DB 4; Length 139;
Best Local Similarity 37.5%; Pred. No. 0.0015;
Matches 18; Conservative 8; Mismatches 19; Indels 3; Gaps 2;

QY 2 VEMQWTTCKRP--ETTNC-VPOERELHKQVNCFFSVAVPWFQYKIL 46
DB 87 VEIGRTTCPKSSGDLQSCFHPDEPMAXYTTCTFVVVSIPLNQLIKLL 134

RESULT 12
US-08-849-303-19
Sequence 19, Application US/08849303
Patent No. 6680424
GENERAL INFORMATION:
APPLICANT: Atkinson, Howard J.
APPLICANT: McPherson, Michael J.
APPLICANT: Urvain, Peter E.
TITLE OF INVENTION: MODIFIED PROTEINASE INHIBITORS
NUMBER OF SEQUENCES: 79
CORRESPONDENCE ADDRESS:
ADDRESSEE: Klauber & Jackson
STREET: 411 Hackensack Avenue, 4th Floor
CITY: Hackensack
STATE: New Jersey
COUNTRY: USA
ZIP: 07601
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/849,303
FILING DATE: 21-MAY-1997
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: Jackson Esq., David A.
REGISTRATION NUMBER: 26,742
REFERENCE/DOCKET NUMBER: 1321-1-003
TELECOMMUNICATION INFORMATION:
TELEPHONE: 201-487-5800
TELEFAX: 201-343-1684
TELEX: 133521
INFORMATION FOR SEQ ID NO: 19:
SEQUENCE CHARACTERISTICS:
LENGTH: 127 amino acids
TYPE: amino acid
STRANDEDNESS: single

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OM protein - protein search, using sw model

Run on: March 23, 2004, 17:10:34 ; Search time 25.908 Seconds
(without alignments)
479.770 Million cell updates/sec

Title: US-09-941-314-17

Perfect score: 273
Sequence: 1 NVEWMTTCCKPRTTNCVPO.....NCFPSVAVPWFPEQYKILNK 48

Scoring table:
BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1049977 seqs, 258955339 residues

Total number of hits satisfying chosen parameters: 1049977

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0*
Maximum Match 100*

Listing first 45 summaries

Database :

Published Applications AA:*
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11: /cgn2_6/ptodata/1/pubpaa/US09C_PUBCOMB.pep.*
12: /cgn2_6/ptodata/1/pubpaa/US09_NEW_PUB.pep.*
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18: /cgn2_6/ptodata/1/pubpaa/US60_PUBCOMB.pep.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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1	273	100.0	48	US-09-941-314-17	Sequence 17, Appl
2	273	100.0	59	US-09-941-314-16	Sequence 16, Appl
3	273	100.0	80	US-09-941-314-15	Sequence 15, Appl
4	273	100.0	115	US-09-941-314-3	Sequence 3, Appl
5	273	100.0	117	US-09-941-314-4	Sequence 4, Appl
6	273	100.0	137	US-09-941-314-2	Sequence 2, Appl
7	133	48.7	33	US-09-941-314-12	Sequence 12, Appl
8	133	48.7	52	US-09-941-314-14	Sequence 14, Appl
9	95.5	35.0	148	US-10-257-174-42	Sequence 42, Appl
10	93	34.1	46	US-09-941-314-10	Sequence 10, Appl
11	93	34.1	49	US-09-941-314-13	Sequence 13, Appl
12	93	34.1	132	US-09-921-180-2	Sequence 2, Appl
13	92.5	33.9	148	US-09-873-135-2	Sequence 2, Appl
14	87	31.9	145	US-09-740-638-2	Sequence 2, Appl
15	87	31.9	145	US-10-006-467-2	Sequence 2, Appl

16	87	31.9	145	US-10-235-148-2	Sequence 2, Appl
17	87	31.9	145	US-10-168-425-14	Sequence 14, Appl
18	87	31.9	165	US-09-740-638-5	Sequence 5, Appl
19	87	31.9	165	US-10-006-467-5	Sequence 5, Appl
20	87	31.9	165	US-10-235-148-5	Sequence 5, Appl
21	80.5	29.5	96	US-10-351-334-334	Sequence 334, App
22	80.5	29.5	147	US-10-219-535-222	Sequence 222, App
23	80.5	29.5	147	US-10-232-230-222	Sequence 222, App
24	80.5	29.5	147	US-10-006-867-144	Sequence 144, App
25	80.5	29.5	147	US-10-063-547-144	Sequence 144, App
26	80.5	29.5	147	US-10-063-616-144	Sequence 144, App
27	80.5	29.5	147	US-10-063-502-144	Sequence 144, App
28	80.5	29.5	147	US-10-227-884-222	Sequence 222, App
29	80.5	29.5	147	US-10-230-163-222	Sequence 222, App
30	80.5	29.5	147	US-10-054-683-31	Sequence 31, Appl
31	80.5	29.5	147	US-10-230-338-222	Sequence 222, App
32	80.5	29.5	147	US-10-218-631-222	Sequence 222, App
33	80.5	29.5	147	US-10-063-518-144	Sequence 144, App
34	80.5	29.5	147	US-10-230-414-222	Sequence 222, App
35	80.5	29.5	147	US-10-063-598-144	Sequence 144, App
36	80.5	29.5	147	US-10-227-693-144	Sequence 144, App
37	80.5	29.5	147	US-10-063-567-144	Sequence 144, App
38	80.5	29.5	147	US-10-216-159A-222	Sequence 222, App
39	80.5	29.5	147	US-10-063-538-144	Sequence 144, App
40	80.5	29.5	147	US-10-218-849-222	Sequence 222, App
41	80.5	29.5	147	US-10-227-873-222	Sequence 222, App
42	80.5	29.5	147	US-10-227-883-222	Sequence 222, App
43	80.5	29.5	147	US-10-219-076-222	Sequence 222, App
44	80.5	29.5	147	US-10-230-434-222	Sequence 222, App
45	80.5	29.5	147	US-10-063-599-144	Sequence 144, App

ALIGNMENTS

US-09-941-314-17
Sequence 17, Application US/09941314
Patent No. US2002042396A1
GENERAL INFORMATION:
APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
TITLE OF INVENTION: Inhibit Cancer Procoagulant Protein
FILE REFERENCE: 00-81PC
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
NUMBER OF SEQ ID NOS: 19
SOFTWARE: PatSeq for Windows Version 4.0
SEQ ID NO 17
LENGTH: 48
TYPE: PRT
ORGANISM: Homo sapiens
US-09-941-314-17

Query Match 100.0%; Score 273; DB 9; Length 48;
Best Local Similarity 100.0%; Pred. No. 3.6e-29;
Matches 48; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Cy 1 NVEWMTTCCKPRTTNCVPORELRHKNCFPSVAVPWFPEQYKILNK 48
Db 1 NVEWMTTCCKPRTTNCVPORELRHKNCFPSVAVPWFPEQYKILNK 48

RESULT 2
US-09-941-314-16
Sequence 16, Application US/09941314
Patent No. US2002042396A1
GENERAL INFORMATION:
APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
TITLE OF INVENTION: Inhibit Cancer Procoagulant Protein

FILE REFERENCE: 00-81PC
CURRENT APPLICATION NUMBER: US/09/941,314
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
NUMBER OF SEQ ID NOS: 19
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 16
LENGTH: 59
TYPE: PRT
ORGANISM: Homo sapiens
US-09-941-314-16

Query Match 100.0%; Score 273; DB 9; Length 59;
Best Local Similarity 100.0%; Pred. No. 4,5e-29;
Matches 48; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NVEWMTTCCKPFTTNCVPOREIHKOVNCFPSVFAVPMFEQYKILNK 48
DB 12 NVEWMTTCCKPFTTNCVPOREIHKOVNCFPSVFAVPMFEQYKILNK 59

RESULT 3
US-09-941-314-15
Sequence 15, Application US/09941314
Patent No. US20020142396A1
GENERAL INFORMATION:
APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
FILE REFERENCE: 00-81PC
CURRENT APPLICATION NUMBER: US/09/941,314
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
NUMBER OF SEQ ID NOS: 19
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 15
LENGTH: 80
TYPE: PRT
ORGANISM: Homo sapiens
US-09-941-314-15

Query Match 100.0%; Score 273; DB 9; Length 80;
Best Local Similarity 100.0%; Pred. No. 6,4e-29;
Matches 48; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NVEWMTTCCKPFTTNCVPOREIHKOVNCFPSVFAVPMFEQYKILNK 48
DB 33 NVEWMTTCCKPFTTNCVPOREIHKOVNCFPSVFAVPMFEQYKILNK 80

RESULT 4
US-09-941-314-3
Sequence 3, Application US/09941314
Patent No. US20020142396A1
GENERAL INFORMATION:
APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
FILE REFERENCE: 00-81PC
CURRENT APPLICATION NUMBER: US/09/941,314
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
NUMBER OF SEQ ID NOS: 19
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 3
LENGTH: 115
TYPE: PRT
ORGANISM: Homo sapiens
US-09-941-314-3

Query Match 100.0%; Score 273; DB 9; Length 115;
Best Local Similarity 100.0%; Pred. No. 9,6e-29;
Matches 48; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NVEWMTTCCKPFTTNCVPOREIHKOVNCFPSVFAVPMFEQYKILNK 48
DB 63 NVEWMTTCCKPFTTNCVPOREIHKOVNCFPSVFAVPMFEQYKILNK 110

RESULT 5
US-09-941-314-4
Sequence 4, Application US/09941314
Patent No. US20020142396A1
GENERAL INFORMATION:
APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
FILE REFERENCE: 00-81PC
CURRENT APPLICATION NUMBER: US/09/941,314
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
NUMBER OF SEQ ID NOS: 19
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 4
LENGTH: 117
TYPE: PRT
ORGANISM: Homo sapiens
US-09-941-314-4

Query Match 100.0%; Score 273; DB 9; Length 117;
Best Local Similarity 100.0%; Pred. No. 9,8e-29;
Matches 48; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NVEWMTTCCKPFTTNCVPOREIHKOVNCFPSVFAVPMFEQYKILNK 48
DB 65 NVEWMTTCCKPFTTNCVPOREIHKOVNCFPSVFAVPMFEQYKILNK 112

RESULT 6
US-09-941-314-2
Sequence 2, Application US/09941314
Patent No. US20020142396A1
GENERAL INFORMATION:
APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
FILE REFERENCE: 00-81PC
CURRENT APPLICATION NUMBER: US/09/941,314
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
NUMBER OF SEQ ID NOS: 19
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 2
LENGTH: 137
TYPE: PRT
ORGANISM: Homo sapiens
US-09-941-314-2

Query Match 100.0%; Score 273; DB 9; Length 137;
Best Local Similarity 100.0%; Pred. No. 1,2e-28;
Matches 48; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NVEWMTTCCKPFTTNCVPOREIHKOVNCFPSVFAVPMFEQYKILNK 48
DB 85 NVEWMTTCCKPFTTNCVPOREIHKOVNCFPSVFAVPMFEQYKILNK 132

RESULT 7
US-09-941-314-12
Sequence 12, Application US/09941314
Patent No. US20020142396A1

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; GENERAL INFORMATION:
; APPLICANT: Zymogenetics, Inc.
; TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
; TITLE OF INVENTION: Inhibit Cancer Procoagulant Protein
; FILE REFERENCE: 00-81PC
; CURRENT APPLICATION NUMBER: US/09/941,314
; PRIOR FILING DATE: 2001-08-29
; PRIOR APPLICATION NUMBER: 60/230,230
; PRIOR FILING DATE: 2001-09-01
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 12
; LENGTH: 33
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-941-314-12

Query Match          48.7%; Score 133; DB 9; Length 33;
Best Local Similarity 100.0%; Pred. No. 1.4e-10;
Matches 23; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 NVEWQTTCKPFTTNCVPOERE 23
DB      11 NVEWQTTCKPFTTNCVPOERE 33

RESULT 8
US-09-941-314-14
; Sequence 14, Application US/09941314
; Patent No. US20020142396A1
; GENERAL INFORMATION:
; APPLICANT: Zymogenetics, Inc.
; TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
; TITLE OF INVENTION: Inhibit Cancer Procoagulant Protein
; FILE REFERENCE: 00-81PC
; CURRENT APPLICATION NUMBER: US/09/941,314
; CURRENT FILING DATE: 2001-08-29
; PRIOR APPLICATION NUMBER: 60/230,230
; PRIOR FILING DATE: 2001-09-01
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 14
; LENGTH: 52
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-941-314-14

Query Match          48.7%; Score 133; DB 9; Length 52;
Best Local Similarity 100.0%; Pred. No. 2.4e-10;
Matches 23; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 NVEWQTTCKPFTTNCVPOERE 23
DB      30 NVEWQTTCKPFTTNCVPOERE 52

RESULT 9
US-10-257-174-42
; Sequence 42, Application US/10257174
; Publication No. US20040034194A1
; GENERAL INFORMATION:
; APPLICANT: Agarwal, Pankaj
; APPLICANT: Murdoch, Paul R.
; APPLICANT: Riazvi, Safia K.
; APPLICANT: Smith, Randall F.
; APPLICANT: Xiang, Zhaoying
; TITLE OF INVENTION: NOVEL COMPOUNDS
; FILE REFERENCE: GP50022
; CURRENT APPLICATION NUMBER: US/10/257,174
; CURRENT FILING DATE: 2002-10-10
; PRIOR APPLICATION NUMBER: PCT/US01/11797
; PRIOR FILING DATE: 2001-04-11
; PRIOR APPLICATION NUMBER: 60/196,603
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; PRIOR FILING DATE: 2000-04-13
; PRIOR APPLICATION NUMBER: 60/199,417
; PRIOR FILING DATE: 2000-04-24
; NUMBER OF SEQ ID NOS: 48
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 42
; LENGTH: 148
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-257-174-42

Query Match          35.0%; Score 95.5; DB 12; Length 148;
Best Local Similarity 37.3%; Pred. No. 8.3e-05;
Matches 19; Conservative 11; Mismatches 18; Indels 3; Gaps 2;

QY      1 NVEWQTTCK--PFTTNCVPOER-ELHKQVNCFFSVFAVPWPFQXILNK 48
DB      91 NLQLRQTVCKRKFDDIDNCPQESLELNTFTCFETISTRPMTWTFSLNK 141

RESULT 10
US-09-941-314-10
; Sequence 10, Application US/09941314
; Patent No. US20020142396A1
; GENERAL INFORMATION:
; APPLICANT: Zymogenetics, Inc.
; TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
; TITLE OF INVENTION: Inhibit Cancer Procoagulant Protein
; FILE REFERENCE: 00-81PC
; CURRENT APPLICATION NUMBER: US/09/941,314
; CURRENT FILING DATE: 2001-08-29
; PRIOR APPLICATION NUMBER: 60/230,230
; PRIOR FILING DATE: 2001-09-01
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 10
; LENGTH: 46
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-941-314-10

Query Match          34.1%; Score 93; DB 9; Length 46;
Best Local Similarity 100.0%; Pred. No. 4.8e-05;
Matches 16; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 NVEWQTTCKPFTTN 16
DB      31 NVEWQTTCKPFTTN 46

RESULT 11
US-09-941-314-13
; Sequence 13, Application US/09941314
; Patent No. US20020142396A1
; GENERAL INFORMATION:
; APPLICANT: Zymogenetics, Inc.
; TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
; TITLE OF INVENTION: Inhibit Cancer Procoagulant Protein
; FILE REFERENCE: 00-81PC
; CURRENT APPLICATION NUMBER: US/09/941,314
; CURRENT FILING DATE: 2001-08-29
; PRIOR APPLICATION NUMBER: 60/230,230
; PRIOR FILING DATE: 2001-09-01
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 13
; LENGTH: 49
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-941-314-13

Query Match          34.1%; Score 93; DB 9; Length 49;
Best Local Similarity 100.0%; Pred. No. 5.2e-05;
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Matches 16; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 NVEMQWTTCKPRTTN 16
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Db 34 NVEMQWTTCKPRTTN 49

RESULT 12
US-09-921-180-2
; Sequence 2, Application US/09921180
; Publication No. US20020192798A1
; GENERAL INFORMATION:
; APPLICANT: Hollaway, James L.
; TITLE OF INVENTION: Zcy89: A member of the Cystatin
; FILE REFERENCE: 00-57
; CURRENT APPLICATION NUMBER: US/09/921,180
; CURRENT FILING DATE: 2001-08-02
; NUMBER OF SEQ ID NOS: 4
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 2
; LENGTH: 132
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-921-180-2

Query Match 34.1%; Score 93; DB 9; Length 132;
Best Local Similarity 41.7%; Pred. No. 0.00016;
Matches 20; Conservative 7; Mismatches 19; Indels 2; Gaps 1;

QY 2 VEMQWTTCKPRTTN--PETTNCVPOERELHKQVNCFSVFAVWPEQYKILN 47
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Db 81 LEMGLFTCKYDEIDNCPLOEGSAEKYCTFVMDARPFWSQENILN 128

RESULT 13
US-09-873-135-2
; Sequence 2, Application US/09873135
; Publication No. US20030165838A1
; GENERAL INFORMATION:
; APPLICANT: Presnell, Scott R.
; APPLICANT: Gao, Zeren
; TITLE OF INVENTION: Zcy86: A Member of the Cystatin
; FILE REFERENCE: 00-37
; CURRENT APPLICATION NUMBER: US/09/873,135
; CURRENT FILING DATE: 2001-06-01
; NUMBER OF SEQ ID NOS: 6
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 2
; LENGTH: 148
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-873-135-2

Query Match 33.9%; Score 92.5; DB 10; Length 148;
Best Local Similarity 37.3%; Pred. No. 0.00021;
Matches 19; Conservative 13; Mismatches 16; Indels 3; Gaps 2;

QY 1 NVEMQWTTCKPRTTN--PETTNCVPOER-ELHKQVNCFSVFAVWPEQYKILN 48
|||
Db 91 NLQRLQTVCKRKFEDDINDCPQESLELNTPSCFFVETMWTYFELINK 141

RESULT 14
US-09-740-638-2
; Sequence 2, Application US/09740638
; Patent No. US20020006656A1
; GENERAL INFORMATION:
; APPLICANT: Hollaway, James L.
; TITLE OF INVENTION: Zcy85: A Member of the Cystatin
; FILE REFERENCE: 99-104

; CURRENT APPLICATION NUMBER: US/09/740,638
; CURRENT FILING DATE: 2000-12-18
; NUMBER OF SEQ ID NOS: 13
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 2
; LENGTH: 145
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-740-638-2

Query Match 31.9%; Score 87; DB 9; Length 145;
Best Local Similarity 29.2%; Pred. No. 0.0011;
Matches 14; Conservative 15; Mismatches 17; Indels 2; Gaps 1;

QY 2 VEMQWTTCKPRTTN--CVPOERELHKQVNCFSVFAVWPEQYKILN 47
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Db 84 VKIGWTKCKRNDTSNNSCPLOSKKRLKSLICSLIYTMWYINVFQLMN 131

RESULT 15
US-10-006-467-2
; Sequence 2, Application US/10006467
; Publication No. US20020164740A1
; GENERAL INFORMATION:
; APPLICANT: Hollaway, James L.
; TITLE OF INVENTION: Zcy85: A Member of the Cystatin
; FILE REFERENCE: 99-104C1
; CURRENT APPLICATION NUMBER: US/10/006,467
; CURRENT FILING DATE: 2001-12-04
; PRIOR APPLICATION NUMBER: 60/172,119
; PRIOR FILING DATE: 1999-12-23
; PRIOR APPLICATION NUMBER: 09/740,638
; PRIOR FILING DATE: 2000-12-18
; NUMBER OF SEQ ID NOS: 13
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 2
; LENGTH: 145
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-006-467-2

Query Match 31.9%; Score 87; DB 13; Length 145;
Best Local Similarity 29.2%; Pred. No. 0.0011;
Matches 14; Conservative 15; Mismatches 17; Indels 2; Gaps 1;

QY 2 VEMQWTTCKPRTTN--CVPOERELHKQVNCFSVFAVWPEQYKILN 47
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Db 84 VKIGWTKCKRNDTSNNSCPLOSKKRLKSLICSLIYTMWYINVFQLMN 131

Search completed: March 23, 2004, 17:17:53
Job time : 26.908 secs

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OM protein - protein search, using sw model

Run on: March 23, 2004, 17:06:09 ; Search time 8.83682 Seconds
(without alignments)
522.495 Million cell updates/sec

Title: US-09-941-314-17

Perfect score: 273
Sequence: 1 NVEMQMTTCCKPRTTNCVPO.....NCFPSVPAVPMFEOYKILNK 48

Scoring table: BIOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 283366 seqs, 96191526 residues

Total number of hits satisfying chosen parameters: 283366

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database :

1: PIR 78:*
2: PIR1:*
3: PIR2:*
4: PIR3:*
5: PIR4:*

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	107.5	39.4	139	2 A45361	cystatin-related e
2	79.5	29.1	139	1 UDCH	cystatin precursor
3	78.5	28.8	120	2 S10587	cystatin C - rat
4	78.5	28.8	127	2 S07085	cystatin C precurs
5	75.5	27.7	141	1 UDHUP1	cystatin S precurs
6	74.5	27.3	141	2 B29632	cystatin SA precur
7	73.5	26.9	140	2 A36163	cystatin C precurs
8	73.5	26.9	142	2 A47142	cystatin D precurs
9	73.5	26.9	146	1 UDHU	cystatin C precurs
10	67.5	24.7	141	1 UDHUP2	cystatin SN precur
11	63	23.1	111	2 A28793	cystatin - puff ad
12	61.5	22.5	112	1 UDBO	cystatin - bovine
13	59.5	21.8	434	1 KGBOL2	kininogen, LMW II
14	59.5	21.8	436	1 KGBOL1	kininogen, LMW I
15	59.5	21.8	619	1 KGBOL1	kininogen, LMW II
16	59.5	21.8	621	1 KGBOL1	kininogen, LMW I
17	57	20.9	455	2 T15622	hypothetical prote
18	56.5	20.7	324	2 T11379	probable phosphati
19	56.5	20.7	427	1 KGHU1	kininogen, LMW pre
20	56.5	20.7	644	1 KGHU1	kininogen, LMW pre
21	56	20.5	111	1 JC2040	cystatin - chum sa
22	56	20.5	302	2 B96520	hypothetical prote
23	56	20.5	367	2 B53384	conserved hypotet
24	56	20.5	426	2 A40440	endothelin 1 and 2
25	56	20.5	427	2 A44158	endothelin recepto
26	56	20.5	427	2 S13424	genome polypolypept
27	56	20.5	3411	1 GNMVY	genome polypolypept
28	56	20.5	3411	1 GNMVY	genome polypolypept
29	55	20.1	141	2 J01470	cystatin S precurs

30	55	20.1	174	1 TVVP44	small T antigen -
31	55	20.1	218	2 A34445	25K calcium-bindin
32	55	20.1	295	2 C43718	hypothetical prote
33	55	20.1	560	2 S27387	interferon alpha r
34	54.5	20.0	243	1 J00021	ubiquitinol-cytochro
35	54	19.8	317	2 S05356	hypothetical prote
36	54	19.8	415	2 S37690	DNA-binding protei
37	54	19.8	415	2 S37690	hypothetical prote
38	54	19.8	453	2 E86464	hypothetical prote
39	54	19.8	620	2 T23522	hypothetical prote
40	53	19.4	415	2 A54126	endothelin recepto
41	53	19.4	530	2 G71157	hypothetical prote
42	53	19.4	695	2 D84634	hypothetical prote
43	53	19.4	711	1 TFHUL	lactoferrin p
44	53	19.4	3396	1 A42551	genome polypept
45	53	19.4	4540	2 T30838	cytoplasmic dynein

ALIGNMENTS

RESULT 1

A45361
cystatin-related epididymal specific protein - mouse (fragment)

C/Species: Mus musculus (house mouse)

C/Date: 10-Jun-1993 #sequence_revision 18-Nov-1994 #text_change 05-Nov-1999

C/Accession: A45361

R/Cornwall, G.A.; Orgebin-Crist, M.C.; Hann, S.R.

Mol. Endocrinol. 6, 1653-1664, 1992

A/Title: The CRIS gene: a unique testis-regulated gene related to the cystatin family is

A/Reference number: A45361; MUID:93078799; PMID:1280328

A/Accession: A45361

A/Status: preliminary; not compared with conceptual translation

A/Molecule type: nucleic acid

A/Residues: 1-139 <COR>

A/Cross-references: GB:849926; NID:9260492; PIDN:AAC35390.1; PID:9260493

A/Note: sequence extracted from NCBI backbone (NCBIP:118813)

C/Superfamily: cystatin; cystatin homology

F:28-139/Domain: cystatin homology <CTS>

Query Match 39.4%; Score 107.5; DB 2; Length 139;
Best Local Similarity 39.2%; Pred. No. 2.4e-06;
Matches 20; Conservative 16; Mismatches 12; Indels 3; Gaps 2;

QY 1 NVEMQMTTCCKP--ETTCVPOER-ELKOVNCFPSVPAVPMFEOYKILNK 48

Db 84 DVOISRSNCKKPLNNTENCIPQKKPELEKRWSCSFLVGLPVMNGEFTLSK 134

RESULT 2

UDCH
cystatin precursor - chicken

N/Alternate names: cystatin I; cysteine proteinase inhibitor; egg-white cystatin

C/Species: Gallus gallus (chicken)

C/Date: 03-Aug-1984 #sequence_revision 12-Apr-1996 #text_change 29-Oct-1999

C/Accession: A34456; A01274; S01461; S48159; S04008; JN0789

R/Coella, R.; Sakaguchi, Y.; Nagase, H.; Bird, J.W.C.

J. Biol. Chem. 264, 17164-17169, 1989

A/Title: Chicken egg white cystatin. Molecular cloning, nucleotide sequence, and tissue c

A/Reference number: A34456; MUID:9008873; PMID:2793849

A/Accession: A34456

A/Molecule type: mRNA

A/Residues: 1-139 <COL>

A/Cross-references: GB:050577; NID:9211714; PIDN:AAA48744.1; PID:9211715

R/Schwabe, C.; Anastasi, A.; Crow, H.; McDonald, J.K.; Barrett, A.J.

Biochem. J. 217, 813-817, 1984

A/Title: Cystatin. Amino acid sequence and possible secondary structure.

A/Reference number: A01274; MUID:84178305; PMID:6712557

A/Accession: A01274

A/Molecule type: protein

A/Residues: 24-139 <SCH>
R/Turk, V.; Brzin, J.; Longer, M.; Ritonja, A.; Bropink, M.; Borchart, U.; Machleidt, W.
Hoppe-Seyler's Z. Physiol. Chem. 364, 1487-1496, 1983

A/Title: Protein inhibitors of cysteine proteinases. III. Amino-acid sequence of cystat

A/Reference number: S01461; MUID:84110059; PMID:6662498

A/Accession: S01461

A/Molecule type: protein

A/Residues: 24-139 <TR>

R/Anastasi, A.; Brown, M.A.; Kambhavi, A.A.; Nicklin, M.J.H.; Sayers, C.A.; Sunter, D.C.

Biochem. J. 211, 129-138, 1983

A/Title: Cystatin, a protein inhibitor of cysteine proteinases. Improved purification fr

A/Reference number: A37514; MUID:83256421; PMID:6409085

A/Contents: annotation; characterization of protein

R/Grubb, A.; Lofberg, H.; Barrett, A.J.

FEBS Lett. 170, 370-374, 1984

A/Title: The disulphide bridges of human cystatin C (gamma-trace) and chicken cystatin.

A/Reference number: S01462

A/Contents: annotation; disulfide bonds

R/Auerwald, E.A.; Neagler, D.K.; Schulze, A.J.; Engh, R.A.; Genenger, G.; Machleidt, W.

Eur. J. Biochem. 224, 407-415, 1994

A/Title: Production, inhibitory activity, folding and conformational analysis of an N-te

A/Reference number: S48159; MUID:95010016; PMID:7925354

A/Accession: S48159

A/Status: preliminary

A/Molecule type: protein

A/Residues: 24-139 <NR>

R/Laber, B.; Krieglstein, K.; Henschen, A.; Kos, J.; Turk, V.; Huber, R.; Bode, W.

FEBS Lett. 249, 162-168, 1989

A/Title: The cysteine proteinase inhibitor chicken cystatin is a phosphoprotein.

A/Reference number: S04008; MUID:89252033; PMID:2721673

A/Accession: S04008

A/Molecule type: protein

A/Residues: 97-114 <LMB>

R/Colella, R.; Bird, J.W.C.

Gene 130, 175-181, 1993

A/Title: Isolation and characterization of the chicken cystatin-encoding gene: Mapping

A/Reference number: JN0789; MUID:93366172; PMID:8359684

A/Accession: JN0789

A/Molecule type: DNA

A/Residues: 1-139 <CO2>

A/Cross-references: GB:M95725

A/Note: authors failed to translate the codon for residue 115-Tyr

C/Comment: This protein binds tightly to and inhibits a variety of cysteine proteinases

C/Genetics:

A/Gene: Csn

A/Intons: 76/3; 114/3

C/Superfamily: cystatin; cystatin homology

C/Keywords: cysteine proteinase inhibitor; egg white; phosphoprotein

F/1-23/Domain: signal sequence #status predicted <SIG>

F/24-139/Product: cystatin, long form #status experimental <CTLF>

F/30-139/Domain: cystatin homology <CYS>

F/32-139/Product: cystatin, short form #status experimental <CYSP>

F/76-80/Region: inhibitory #status predicted

F/94-104,118-138/Disulfide bonds: #status experimental

F/103/Binding site: phosphate (Ser) (covalent) (partial) #status experimental

Query Match 29.1%; Score 79.5; DB 1; Length 139;

Best Local Similarity 37.5%; Pred. No. 0.0082;

Matches 18; Conservative 8; Mismatches 19; Indels 3; Gaps 2;

Qy 2 VEMQWTTCKQKPE--ETNC-VPOERELHKQVNCFFSVFAVPMFEQYKIL 46

Db 87 VEIGRTTCPSKSGDLQSCFHDPEPMAYTCTFVAVSIPWLNQIKL 134

RESULT 3

S10587

Cystatin C - rat

C/Species: Rattus sp. (rat)

C/Date: 21-Nov-1993 #sequence_revision 03-Nov-1995 #text_change 16-Jul-1999

C/Accession: S10587

R/Bernard, F.; Esnard, A.; Faucher, D.; Canoy, J.P.; Derancourt, J.; Brillard, M.; Gauch

Biol. Chem. Hoppe-Seyler 377 (Suppl.), 161-166, 1990

A/Title: Rat cystatin C: the complete amino acid sequence reveals a site for N-glycosyla

A/Reference number: S10587; MUID:90380276; PMID:2400577

A/Accession: S10587

A/Status: preliminary

A/Molecule type: protein

A/Residues: 1-120 <ESN>

A/Note: 43-Asn was also found

A/Note: the sequence from Fig. 2 is inconsistent with that from Fig. 1 in having 18-Ala

C/Superfamily: cystatin; cystatin homology

F/9-120/Domain: cystatin homology <CYS>

Query Match 28.8%; Score 78.5; DB 2; Length 120;

Best Local Similarity 40.5%; Pred. No. 0.0095;

Matches 17; Conservative 8; Mismatches 14; Indels 3; Gaps 2;

Qy 1 NVEMQWTTCKQKPE--TNC-VPOERELHKQVNCFFSVFAVPM 39

Db 65 DVEMGRITTCRSQTNLNCFFHDQPHLMRKALCSFQIVSPW 106

RESULT 4

S07085

Cystatin C precursor - rat (fragment)

C/Species: Rattus norvegicus (Norway rat)

C/Date: 01-Dec-1993 #sequence_revision 03-Aug-1995 #text_change 16-Jul-1999

C/Accession: S07085; S01337; S21109

R/Cole, T.; Dickson, P.W.; Bernard, F.; Averill, S.; Risbridger, G.P.; Gauchier, F.; Schre

Eur. J. Biochem. 186, 35-42, 1989

A/Title: The cDNA structure and expression analysis of the genes for the cysteine protei

A/Reference number: S07085; MUID:90092122; PMID:2689174

A/Accession: S07085

A/Status: preliminary

A/Molecule type: mRNA

A/Residues: 1-127 <COL>

A/Cross-references: EMBL:X16957; NID:956041; PIDN:CA034831.1; PID:9736290

R/Bernard, A.; Esnard, F.; Faucher, D.; Gauchier, F.

FEBS Lett. 236, 475-478, 1988

A/Title: Two rat homologues of human cystatin C

A/Reference number: S01337; MUID:88313020; PMID:3044831

A/Accession: S01337

A/Molecule type: protein

A/Residues: 8-49 <ESN>

R/Bernard, A.; Esnard, F.; Guillon, F.; Gauchier, F.

FEBS Lett. 300, 131-135, 1992

A/Title: Production of the cysteine proteinase inhibitor cystatin C by rat Sertoli cells

A/Reference number: S21109; MUID:92252121; PMID:1563513

A/Accession: S21109

A/Molecule type: protein

A/Residues: 8, 'XX', 11-20 <ES2>

C/Superfamily: cystatin; cystatin homology

C/Keywords: cysteine proteinase inhibitor

F/16-127/Domain: cystatin homology <CYS>

F/80-90,104-124/Disulfide bonds: #status predicted

Query Match 28.8%; Score 78.5; DB 2; Length 127;

Best Local Similarity 40.5%; Pred. No. 0.01; Indels 3; Gaps 2;

Matches 17; Conservative 8; Mismatches 14; Indels 3; Gaps 2;

Qy 1 NVEMQWTTCKQKPE--TNC-VPOERELHKQVNCFFSVFAVPM 39

Db 72 DVEMGRITTCRSQTNLNCFFHDQPHLMRKALCSFQIVSPW 113

RESULT 5

UDHUP1

Cystatin S precursor - human

N/Alternate names: cystatin SA-III; salivary acidic protein-1

C/Species: Homo sapiens (man)

C/Date: 25-Feb-1985 #sequence_revision 08-Feb-1996 #text_change 16-Jul-1999

C/Accession: S17667; S16500; A01272; A29603; S19280; A56608

R/Bohek, L.A.; Aguirre, A.; Levine, M.J.

Biochem. J. 278, 627-635, 1991

A/Title: Human salivary cystatin S. Cloning, sequence analysis, hybridization in situ and

A/Reference number: S17667; MUID:91378918; PMID:1898352

A/Accession: S17667

A/Molecule type: mRNA

A:Residues: 1-141 <BOB>
 A:Cross-references: EMBL:X54667; NID:G30365; PIDD:CA38478.1; PID:G30366
 R:Lemkin, M.S.; Jensen, J.L.; Setayesh, M.R.; Troxler, R.F.; Oppenheim, F.G.
 Arch. Biochem. Biophys. 288, 664-670, 1991
 A:Title: Salivary cystatin SA-III, a potential precursor of the acquired enamel pellicle
 A:Reference number: S16500; MUID:91378515; PMID:1898055
 A:Accession: S16500
 A:Status: preliminary
 A:Molecule type: protein
 A:Residues: 21-134, 'D', 136-141 <IHU>
 R:Isemura, S.; Saitoh, E.; Sanada, K.
 J. Biochem. 96, 489-498, 1984
 A:Title: Isolation and amino acid sequence of SP-1, an acidic protein of human whole sal
 A:Reference number: A91985; MUID:85054716; PMID:6501254
 A:Accession: A01272
 A:Molecule type: protein
 A:Residues: 23-134, 'D', 136-141 <ISB>
 R:Isemura, S.; Saitoh, E.; Ito, S.; Isemura, M.; Sanada, K.
 J. Biochem. 96, 1311-1314, 1984
 A:Title: Cystatin S: a cysteine proteinase inhibitor of human saliva.
 A:Reference number: A91981; MUID:85104877; PMID:6394600
 A:Contents: annotation; inhibitor specificity
 R:Hawke, D.H.; Yuan, P.M.; Wilson, K.J.; Hunkapiller, M.W.
 Biochem. Biophys. Res. Commun. 145, 1248-1253, 1987
 A:Title: Identification of a long form of cystatin from human saliva by rapid microbore
 A:Reference number: A29603; MUID:87270697; PMID:3436880
 A:Accession: A29603
 A:Molecule type: protein
 A:Residues: 21-51 <HAM>
 R:Ramasubbu, N.; Reddy, M.S.; Bergey, E.D.; Haraszy, G.G.; Soni, S.D.; Levine, M.J.
 Biochem. J. 280, 341-352, 1991
 A:Title: Large-scale purification and characterization of the major phosphoproteins and
 A:Reference number: S19279; MUID:92082469; PMID:1747107
 A:Accession: S19280
 A:Status: preliminary
 A:Molecule type: protein
 A:Residues: 21-55 <RMB>
 R:Johnson, M.; Richardson, C.F.; Bergey, E.D.; Levine, M.J.; Nancollas, G.H.
 Arch. Oral Biol. 36, 631-636, 1991
 A:Title: The effects of human salivary cystatins and statherin on hydroxyapatite crystal
 A:Reference number: A56608; MUID:92074898; PMID:1741693
 A:Accession: A56608
 A:Molecule type: protein
 A:Residues: 21-36 <JOH>
 A:Note: sequence extracted from NCBI backbone (NCBI:67866)
 C:Note: authors designate form without phosphate as cystatin S and form containing one ph
 C:Comment: This protein strongly inhibits papain and ficin, partially inhibits stem brom
 competitively.
 C:Genetics:
 A:Gene: GDB:CST4
 A:Cross-references: GDB:136381
 A:Map position: 20p11.2-20p11.2
 C:Superfamily: cystatin; cystatin homology
 C:Keywords: cysteine proteinase inhibitor; phosphoprotein; saliva
 P:1-20/Domain: signal sequence #status predicted <SIG>
 P:21-141/Product: cystatin S #status predicted <MAT>
 P:30-141/Domain: cystatin homology <CYS>
 F:76-80/Region: inhibitory #status predicted
 F:94-104,118-138/Disulfide bonds: #status predicted

Query Match 27.7%; Score 75.5; DB 1; Length 141;
 Best Local Similarity 34.0%; Pred. No. 0.027; Mismatches 20; Indels 3; Gaps 2;
 Matches 17; Conservative 10; Mismatches 20; Indels 3; Gaps 2;
 QY 1 NMEMQWTTCK--PETNVCVQER-ELHKQVNCFFSFAVFWPEQYKILN 47
 Db 86 DVEGRITCTKSQPNLDTCAFHQRPLOKQGLCSFQYEVWEDRMGLVN 135

RESULT 6
 B29632
 Cystatin SA precursor - human
 C:Species: Homo sapiens (man)

C:Date: 31-Mar-1989 #sequence revision 30-Jun-1989 #text_change 16-Jul-1999
 A:Accession: B29632; S02490; A41422; B27015
 R:Saitoh, E.; Kim, H.S.; Smithies, O.; Maeda, N.
 Gene 61, 329-338, 1987
 A:Title: Human cysteine-proteinase inhibitors: nucleotide sequence analysis of three mem
 A:Reference number: A91589; MUID:88185836; PMID:3446578
 A:Accession: B29632
 A:Molecule type: DNA
 A:Residues: 1-141 <SAI>
 A:Cross-references: GB:M19673; GB:M19170; NID:G186403; PIDD:AAA6116.1; PID:G386826
 A:Note: the authors translated the codon GAC for residue 129 as Asn
 R:Saitoh, E.; Isemura, S.; Sanada, K.; Kim, H.S.; Smithies, O.; Maeda, N.
 Biol. Chem. Hoppe-Seyler 369, 191-197, 1988
 A:Title: Cystatin superfamily. Evidence that family II cystatin genes are evolutionarily
 A:Reference number: S02489; MUID:89076505; PMID:3202964
 A:Accession: S02490
 A:Status: not compared with conceptual translation
 A:Molecule type: DNA
 A:Residues: 21-141 <SA2>
 R:Isemura, S.; Saitoh, E.; Sanada, K.
 J. Biochem. 102, 693-704, 1987
 A:Title: Characterization and amino acid sequence of a new acidic cysteine proteinase int
 A:Reference number: A41422; MUID:88139220; PMID:3436950
 A:Accession: A41422
 A:Molecule type: protein
 A:Residues: 25-141 <ISB>
 R:Isemura, S.; Saitoh, E.; Sanada, K.; Isemura, M.; Ito, S.
 in Cysteine Proteinases and Their Inhibitors, Turk, V., ed., pp.497-505, Walter de Gruyter
 A:Title: Cystatin S and the related cysteine proteinase inhibitors in human saliva.
 A:Reference number: A27015
 A:Accession: B27015
 A:Molecule type: protein
 A:Residues: 25-134, 'D', 136-141 <IS2>
 C:Genetics:
 A:Gene: GDB:CST2
 A:Cross-references: GDB:119816; OMIM:123856
 A:Map position: 20p11.2-20p11.2
 C:Superfamily: cystatin; cystatin homology
 F:30-141/Domain: cystatin homology <CYS>

Query Match 27.3%; Score 74.5; DB 2; Length 141;
 Best Local Similarity 32.0%; Pred. No. 0.036; Mismatches 16; Conservative 11; Mismatches 20; Indels 3; Gaps 2;
 Matches 16; Conservative 11; Mismatches 20; Indels 3; Gaps 2;
 QY 1 NMEMQWTTCK--PETNVCVQER-ELHKQVNCFFSFAVFWPEQYKILN 47
 Db 86 DVEGRITCTKSQPNLDTCAFHQRPLOKQGLCSFQYEVWEDRMGLVN 135

RESULT 7
 A36163
 Cystatin C precursor - mouse
 C:Species: Mus musculus (house mouse)
 C:Date: 14-Dec-1990 #sequence revision 14-Dec-1990 #text_change 16-Jul-1999
 A:Accession: A36163
 R:Isolem, M.; Rawson, C.; Lindburg, K.; Barnes, D.
 Biochem. Biophys. Res. Commun. 172, 945-951, 1990
 A:Title: Transforming growth factor beta regulates cystatin C in serum-free mouse embryo
 A:Reference number: A36163; MUID:91054522; PMID:2241983
 A:Accession: A36163
 A:Status: preliminary
 A:Molecule type: mRNA
 A:Residues: 1-140 <SOL>
 A:Cross-references: EMBL:M59470; NID:G192911; PIDD:AAA63398.1; PID:G192912
 C:Superfamily: cystatin; cystatin homology
 F:29-140/Domain: cystatin homology <CYS>
 F:93-103,117-137/Disulfide bonds: #status predicted

Query Match 26.9%; Score 73.5; DB 2; Length 140;
 Best Local Similarity 38.1%; Pred. No. 0.047; Mismatches 16; Conservative 9; Mismatches 14; Indels 3; Gaps 2;
 Matches 16; Conservative 9; Mismatches 14; Indels 3; Gaps 2;
 QY 1 NMEMQWTTCKPRT--TNC-VQERELHKQVNCFFSFAVFW 39

Db 85 DVENGRTCTKSGTNLTDCPFHDPHIMRALKCSFOIYSVPM 126

RESULT 8

A47142

Cystatin D precursor - human

C/Species: Homo sapiens (man)

C/Date: 03-May-1994 #sequence_revision 03-May-1994 #text_change 16-Jul-1999

C/Accession: A47142; S18212

R/Reijle, J.P.; Balbin, M.; Abrahamson, M.; Velasco, G.; Dalpoge, H.; Grubb, A.; Lopez-C

U. Biol. Chem. 268, 15737-15744, 1993

A/Title: Human cystatin D. cDNA cloning, characterization of the Escherichia coli expres

A/Reference number: A47142; MUID:93340179; PMID:8340398

A/Accession: A47142

A/Status: preliminary

A/Molecule type: mRNA

A/Residues: 1-142 <FE>

A/Cross-references: GB:X70377; NID:G398710; PIDN:CAA49838.1; PID:G398711

A/Note: single residue difference between this report and S18218 was investigated and st

R/Reijle, J.P.; Abrahamson, M.; Velasco, G.; Grubb, A.; Lopez-Otin, C.

J. Biol. Chem. 266, 20538-20543, 1991

A/Title: Structure and expression of the gene encoding cystatin D, a novel human cystein

A/Reference number: S18212; MUID:92041895; PMID:1939105

A/Accession: S18212

A/Status: preliminary

A/Molecule type: DNA

A/Residues: 1-45, 'C', 47-142 <FR2>

A/Cross-references: EMBL:X59564; NID:G30263; PIDN:CAA42590.1; PID:G30264

C/Genetic8:

A/Gene: GDB:CST5

A/Cross-references: GDB:136380; OMIM:123858

A/Map position: 20p11.21-20p11.21

A/Intons: 77/3; 115/3

C/Superfamily: cystatin; cystatin homology

C/Keywords: cysteine proteinase inhibitor; extracellular protein; saliva

F/1-20/Domain: signal sequence #status predicted <SIG>

F/30-142/Domain: cystatin homology <CYS>

Query Match 26.9%; Score 73.5; DB 2; Length 142;

Best Local Similarity 36.0%; Pred. No. 0.048; Mismatches 21; Indels 3; Gaps 2;

Matches 18; Conservative 8; Mismatches 21; Indels 3; Gaps 2;

Db 87 NVKFGRTCTKSGTNLTDCPFHDPHIMRALKCSFOIYSVPM 136

1 NVKFGRTCTKSGTNLTDCPFHDPHIMRALKCSFOIYSVPM 47

87 NVKFGRTCTKSGTNLTDCPFHDPHIMRALKCSFOIYSVPM 136

87 NVKFGRTCTKSGTNLTDCPFHDPHIMRALKCSFOIYSVPM 136

87 NVKFGRTCTKSGTNLTDCPFHDPHIMRALKCSFOIYSVPM 136

87 NVKFGRTCTKSGTNLTDCPFHDPHIMRALKCSFOIYSVPM 136

87 NVKFGRTCTKSGTNLTDCPFHDPHIMRALKCSFOIYSVPM 136

87 NVKFGRTCTKSGTNLTDCPFHDPHIMRALKCSFOIYSVPM 136

87 NVKFGRTCTKSGTNLTDCPFHDPHIMRALKCSFOIYSVPM 136

87 NVKFGRTCTKSGTNLTDCPFHDPHIMRALKCSFOIYSVPM 136

87 NVKFGRTCTKSGTNLTDCPFHDPHIMRALKCSFOIYSVPM 136

87 NVKFGRTCTKSGTNLTDCPFHDPHIMRALKCSFOIYSVPM 136

87 NVKFGRTCTKSGTNLTDCPFHDPHIMRALKCSFOIYSVPM 136

87 NVKFGRTCTKSGTNLTDCPFHDPHIMRALKCSFOIYSVPM 136

87 NVKFGRTCTKSGTNLTDCPFHDPHIMRALKCSFOIYSVPM 136

87 NVKFGRTCTKSGTNLTDCPFHDPHIMRALKCSFOIYSVPM 136

87 NVKFGRTCTKSGTNLTDCPFHDPHIMRALKCSFOIYSVPM 136

87 NVKFGRTCTKSGTNLTDCPFHDPHIMRALKCSFOIYSVPM 136

87 NVKFGRTCTKSGTNLTDCPFHDPHIMRALKCSFOIYSVPM 136

87 NVKFGRTCTKSGTNLTDCPFHDPHIMRALKCSFOIYSVPM 136

87 NVKFGRTCTKSGTNLTDCPFHDPHIMRALKCSFOIYSVPM 136

87 NVKFGRTCTKSGTNLTDCPFHDPHIMRALKCSFOIYSVPM 136

87 NVKFGRTCTKSGTNLTDCPFHDPHIMRALKCSFOIYSVPM 136

87 NVKFGRTCTKSGTNLTDCPFHDPHIMRALKCSFOIYSVPM 136

87 NVKFGRTCTKSGTNLTDCPFHDPHIMRALKCSFOIYSVPM 136

87 NVKFGRTCTKSGTNLTDCPFHDPHIMRALKCSFOIYSVPM 136

87 NVKFGRTCTKSGTNLTDCPFHDPHIMRALKCSFOIYSVPM 136

87 NVKFGRTCTKSGTNLTDCPFHDPHIMRALKCSFOIYSVPM 136

87 NVKFGRTCTKSGTNLTDCPFHDPHIMRALKCSFOIYSVPM 136

87 NVKFGRTCTKSGTNLTDCPFHDPHIMRALKCSFOIYSVPM 136

87 NVKFGRTCTKSGTNLTDCPFHDPHIMRALKCSFOIYSVPM 136

87 NVKFGRTCTKSGTNLTDCPFHDPHIMRALKCSFOIYSVPM 136

87 NVKFGRTCTKSGTNLTDCPFHDPHIMRALKCSFOIYSVPM 136

87 NVKFGRTCTKSGTNLTDCPFHDPHIMRALKCSFOIYSVPM 136

87 NVKFGRTCTKSGTNLTDCPFHDPHIMRALKCSFOIYSVPM 136

87 NVKFGRTCTKSGTNLTDCPFHDPHIMRALKCSFOIYSVPM 136

87 NVKFGRTCTKSGTNLTDCPFHDPHIMRALKCSFOIYSVPM 136

87 NVKFGRTCTKSGTNLTDCPFHDPHIMRALKCSFOIYSVPM 136

87 NVKFGRTCTKSGTNLTDCPFHDPHIMRALKCSFOIYSVPM 136

87 NVKFGRTCTKSGTNLTDCPFHDPHIMRALKCSFOIYSVPM 136

87 NVKFGRTCTKSGTNLTDCPFHDPHIMRALKCSFOIYSVPM 136

87 NVKFGRTCTKSGTNLTDCPFHDPHIMRALKCSFOIYSVPM 136

87 NVKFGRTCTKSGTNLTDCPFHDPHIMRALKCSFOIYSVPM 136

87 NVKFGRTCTKSGTNLTDCPFHDPHIMRALKCSFOIYSVPM 136

87 NVKFGRTCTKSGTNLTDCPFHDPHIMRALKCSFOIYSVPM 136

87 NVKFGRTCTKSGTNLTDCPFHDPHIMRALKCSFOIYSVPM 136

A/Title: Stroke in Icelandic patients with hereditary amyloid angiopathy is related to a

A/Reference number: J10095; MUID:89235594; PMID:2541223

A/Accession: J10095

A/Molecule type: DNA

A/Residues: 1-146 <LEV>

A/Cross-references: GB:X61881; NID:G30367; PIDN:CAA43856.2; PID:G4490944

A/Note: the cystatin C gene isolated from the brain of an Icelandic patient with heredit

e)

R/Satcho, B.; Sabatini, L.M.; Eddy, R.L.; Shows, T.B.; Azen, E.A.; Isemura, S.; Sanada, f

Biochem. Biophys. Res. Commun. 162, 1324-1331, 1989

A/Title: The human cystatin C gene (CST3) is a member of the cystatin gene family which

A/Reference number: A33400; MUID:89350949; PMID:2764935

A/Accession: A33400

A/Molecule type: DNA

A/Residues: 1-24, 'T', 26-146 <SNI>

A/Cross-references: GB:M27889; GB:M27890; GB:M27891; NID:G181385; PIDN:AAA52164.1; PID:G3

R/Ghislo, J.; Cowan, N.; Frangione, B.

Biol. Chem. Hoppe-Seyler 369, 205-208, 1988

A/Title: Isolation of a sequence encoding human cystatin C. Conservation of exon-intron

A/Reference number: S02751; MUID:89076507; PMID:3264504

A/Accession: S02751

A/Molecule type: DNA

A/Residues: 82-119 <GH2>

A/Cross-references: EMBL:M27769

A/Note: the authors translated the codon ACC for residue 105 as Thr; the sequence shown i

R/Grubb, A.; Lofberg, H.

Proc. Natl. Acad. Sci. U.S.A. 79, 3024-3027, 1982

A/Title: Human gamma-trace, a basic microprotein: amino acid sequence and presence in the

A/Reference number: A01270; MUID:82222268; PMID:6283552

A/Accession: A01270

A/Molecule type: protein

A/Residues: 27-131, 'S', 133-146 <GRU>

R/Ghislo, J.; Jansson, O.; Frangione, B.

Proc. Natl. Acad. Sci. U.S.A. 83, 2974-2978, 1986

A/Title: Amyloid fibrils in hereditary cerebral hemorrhage with amyloidosis of Iceland ty

A/Reference number: A25434; MUID:86206076; PMID:3517880

A/Accession: A25434

A/Molecule type: protein

A/Residues: 37-93, 'Q', 95-146 <GHI>

R/Turk, V.; Brzin, J.; Longer, M.; Ritonja, A.; Eropkin, M.; Borchart, U.; Machleidt, W.

Hoppe-Seyler's Z. Physiol. Chem. 364, 1487-1496, 1983

A/Title: Protein inhibitors of cysteine proteinases. III. Amino-acid sequence of cystatir

A/Reference number: S01461; MUID:84110059; PMID:6662498

A/Accession: S12288

A/Molecule type: protein

A/Residues: 27-73 <TRU>

R/Brzin, J.; Popovic, T.; Turk, V.

Biochem. Biophys. Res. Commun. 118, 103-109, 1984

A/Title: Human cystatin, a new protein inhibitor of cysteine proteinases.

A/Reference number: A32732; MUID:84128015; PMID:6365094

A/Accession: A32732

A/Molecule type: protein

A/Residues: 27-76 <BRZ>

R/Olafsson, I.; Gudmundsson, G.; Abrahamson, M.; Jansson, O.; Grubb, A.

Scand. J. Clin. Lab. Invest. 50, 85-93, 1990

A/Title: The amino terminal portion of cerebrospinal fluid cystatin C in hereditary cyste

A/Reference number: A60552; MUID:90193615; PMID:2315647

A/Accession: A60552

A/Molecule type: protein

A/Residues: 27-49, 'XX', 52-64 <OLA>

A/Note: this protein, purified from cerebrospinal fluid of patients with the autosomal de

fective gene is not present in CSF but is found instead in amyloid deposits

R/Popovic, T.; Brzin, J.; Ritonja, A.; Turk, V.

Biol. Chem. Hoppe-Seyler 371, 575-580, 1990

A/Title: Different forms of human cystatin C.

A/Reference number: S10607; MUID:91025625; PMID:2222856

A/Accession: S10607

A/Molecule type: protein

A/Residues: 27-53 <POP>

A/Experimental source: urine, kidney disease

A/Note: truncated forms with amino ends at positions 35 and 36 of the precursor were also

R/Grubb, A.; Lofberg, H.; Barrett, A.J.

FEBS Lett. 170, 370-374, 1984

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OM protein - protein search, using sw model

Run on: March 23, 2004, 17:05:08 ; Search time 5.42259 Seconds
(without alignments)
460.917 Million cell updates/sec

Title: US-09-941-314-17

Sequence: 1 NVEMQWTTQCKPRTTNCVPO.....NCFPSVPAVPMFEQYKLK 48

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 141681 seqs, 52070155 residues

Total number of hits satisfying chosen parameters: 141681

Minimum DB seq length: 0

Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database: SwissProt_42:*

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length DB	ID	Description
1	273	100.0	137	CS11_HUMAN	Q9H112 homo sapien
2	155	56.8	139	CS11_MOUSE	Q9d269 mus musculu
3	107.5	39.4	142	CS18_MOUSE	P32766 mus musculu
4	100.5	36.8	142	CS18_MOUSE	O88969 rattus norv
5	87	31.9	142	CS18_MOUSE	Q9H114 rattus norv
6	85.5	31.3	142	CS18_MOUSE	O60676 homo sapien
7	80.5	29.5	147	CS18_MOUSE	Q9H493 homo sapien
8	79.5	29.1	139	CYT_CHICK	P01038 gallus gall
9	78.5	28.8	116	CYT_CHICK	P01061 coturnix co
10	78.5	28.8	127	CYT_CHICK	P14841 rattus norv
11	76.5	28.0	146	CYT_CHICK	O19093 salmoxi bcl
12	75.5	27.7	141	CYT_HUMAN	P01036 homo sapien
13	74.5	27.3	141	CYT_HUMAN	P09228 homo sapien
14	74.5	27.3	148	CYT_RABIT	O97862 cyctolagus
15	73.5	26.9	140	CYT_MOUSE	P21460 mus musculu
16	73.5	26.9	142	CYT_HUMAN	P28328 homo sapien
17	73.5	26.9	146	CYT_HUMAN	P01033 homo sapien
18	72.5	26.6	146	CYT_MOUSE	O19092 macaca mula
19	67.5	24.7	141	CYT_HUMAN	P01037 homo sapien
20	67	24.5	145	CYT_HUMAN	P56096 homo sapien
21	64	23.4	129	CYT_MOUSE	P35481 cyprinus ca
22	63	23.1	111	CYT_MOUSE	P08993 bitis ariet
23	61.5	22.5	148	CYT_MOUSE	O89098 mus musculu
24	60	22.0	144	CYT_MOUSE	P01047 bos taurus
25	59.5	21.8	434	KNL1_BOVIN	P01046 bos taurus
26	59.5	21.8	435	KNL1_BOVIN	P01045 bos taurus
27	59.5	21.8	619	KNH2_BOVIN	P01044 bos taurus
28	59.5	21.8	621	KNH1_BOVIN	Q92544 homo sapien
29	58.5	21.4	625	CS18_MOUSE	Q92046 mus musculu
30	57.5	21.1	137	YXK5_CAEEL	O18179 caenorhabdi
31	57	20.9	455	CYT_HUMAN	P015828 homo sapien
32	56.5	20.7	149	KNH2_BOVIN	P01042 homo sapien
33	56.5	20.7	644	KNH2_BOVIN	P01042 homo sapien

34	56	20.5	426	1	ETIR_RAT	P26684 rattus norv
35	56	20.5	427	1	ETIR_BOVIN	P21450 bos taurus
36	56	20.5	427	1	ETIR_HUMAN	P25101 homo sapien
37	56	20.5	427	1	ETIR_MOUSE	O61614 mus musculu
38	56	20.5	427	1	ETIR_PIG	O29010 mus scrofa
39	56	20.5	3411	1	POLG_YERVI	P03314 y genome po
40	56	20.5	3411	1	POLG_YERV2	P19901 y genome po
41	55	20.1	141	1	CYT8_RAT	P19313 rattus norv
42	55	20.1	174	1	TASM_SVAO	P03081 simian viru
43	55	20.1	218	1	CB25_TETTH	P09226 tetrahymena
44	55	20.1	295	1	YDH2_XANAU	P22664 xanthobacte
45	55	20.1	560	1	INR1_BOVIN	O04790 bos taurus

ALIGNMENTS

RESULT 1
ID CS11_HUMAN STANDARD; PRT; 137 AA.
AC Q9H112; Q9H113;
DT 28-FEB-2003 (Rel. 41, Last sequence update)
DT 28-FEB-2003 (Rel. 41, Last annotation update)
DE Cystatin II precursor.
GN CS11 OR CS18L.
OS Homo sapiens (human).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.
OX NCBI_Taxid=9606;
RN [1]
RP SEQUENCE FROM N.A. (ISOFORMS 1 AND 2).
RX MEDLINE=1638749; PubMed=11780052;
RA Deloukas P., Matthews L.H., Ashurst J., Burton J., Gilbert J.G.R.,
RA Jones M., Stavridis G., Almeida J.P., Babbage A.K., Baggley C.L.,
RA Bailey J., Barlow K.F., Bates K.N., Beard L.M., Beare D.M.,
RA Beasley O.P., Bird C.P., Blakey S.E., Bridgeman A.M., Brown A.J.,
RA Buck D., Burrill W.D., Butler A.P., Carder C., Carter N.P.,
RA Chapman J.C., Clamp M., Clark G., Clark L.N., Clark S.Y., Clee C.M.,
RA Clegg S., Cobley V.E., Collier R.E., Connor R.E., Corby N.R.,
RA Coulson A., Coville G.J., Deadman R., Dhadda P.D., Dunn M.,
RA Ellington A.G., Frankland J.A., Frazer A., French L., Garner P.,
RA Graffham D.V., Griffiths C., Griffiths M.N.D., Gwilliam R., Hall R.E.,
RA Hammond S., Harley J.L., Heath P.D., Ho S., Holden J.L., Howden P.J.,
RA Huckle E., Hunt A.R., Hunt S.E., Jekosch K., Johnson C.M., Johnson D.,
RA Kay M.P., Kimberley A.M., King A., Knights A., Laird G.K., Lawlor S.,
RA Leivasalho M.H., Leverisha M.A., Lloyd C., Lloyd D.M., Lovell J.D.,
RA Marsh V.L., Martin S.L., McComachie L.J., McMay K., McMuray A.A.,
RA Milne S.A., Mistry D., Moore M.J.F., Mullikin J.C., Nickerson T.,
RA Oliver K., Parker A., Patel R., Pearce T.A.V., Peck A.I.,
RA Phillimore B.J.C.T., Prathalingam S.R., Plumb R.W., Ramsey H.,
RA Rice C.M., Ross M.T., Scott C.E., Sehra H.K., Showkeen R., Sims S.,
RA Skuse C.D., Smith M.L., Soderlund C., Steward C.A., Sulston J.E.,
RA Swann R.M., Symmore N., Taylor R., Tee L., Thomas D.W., Thorpe A.,
RA Tracey A., Tromans A.C., Vaudin M., Wall M., Wallis J.M., Williams S.A.,
RA Whitehead S.L., Whitaker P., Willey D.L., Williams L., Williams S.A.,
RA Wilming L., Wray P.W., Hubbard T., Durbin R.M., Bentley D.R., Beck S.,
Rogers J.;
RT "The DNA sequence and comparative analysis of human chromosome 20.";
RL Nature 414:865-871(2001).
-1- SUBCELLULAR LOCATION: Secreted (potential).
-1- ALTERNATIVE PRODUCTS:
Event=Alternative splicing; Named isoforms=2;
Name=1;
IsoId=Q9H112-1; Sequence=Displayed;
Name=2;
IsoId=Q9H112-2; Sequence=VSP_001260;
Note=No experimental confirmation available;
-1- SIMILARITY: Belongs to the cystatin family.

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DR EMBL; AL096677; CAC13170.1; -
 DR EMBL; AL096677; CAC17423.1; -
 DR HSSP; P01038; 1A90.
 DR Genew; HGNC:15959; CST11.
 DR InterPro; IPR000010; Cystatin.
 DR Pfam; PF000031; Cystatin; 1.
 DR SMART; SM00043; CY; 1.
 DR PROSITE; PS00287; CYSTATIN; FALSE_NEG.
 DR Thiol protease inhibitor; Signal; Alternative splicing.
 DR SIGNAL 1 25
 FT CHAIN 26 137 CYPSTATIN 11.
 FT SITE 75 79 SECONDARY AREA OF CONTACT (POTENTIAL).
 FT DISULFID 93 101 BY SIMILARITY.
 FT CARBOHYD 114 134 N-LINKED (GLCNAC. .) (POTENTIAL).
 FT VARSPLIC 131 131 Missing (in isoform 2).
 FT 76 110 /FTid=VSP_001260.
 SQ SEQUENCE 137 AA; 16375 MM; C585C8C3A585C3B CRC64;

Query Match 100.0%; Score 273; DB 1; Length 137;
 Best Local Similarity 100.0%; Pred. No. 4,4e-29;
 Matches 48; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NVEWMQTTCKPPTNCVPERELHKOVNCFPSFAVPMWFOYILNK 48
 DB 85 NVEWMQTTCKPPTNCVPERELHKOVNCFPSFAVPMWFOYILNK 132

RESULT 2
 CS11_MOUSE
 ID CS11_MOUSE STANDARD; PRT; 139 AA.
 AC Q9D269;
 DT 28-FEB-2003 (Rel. 41, Created)
 DT 28-FEB-2003 (Rel. 41, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Cystatin 11 precursor.
 GN CST11.
 OS Mus musculus (Mouse).
 OC Eukaryota; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Mus.
 OX NCBI_TaxID=10090;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN=C57BL/6J; TISSUE=Epididymis;
 RX MEDLINE=21085660; PubMed=11217851;
 RA Kawai J., Shimagawa A., Shibata K., Yoshino M., Itoh M., Iehi Y.,
 Araiwa T., Hara A., Fukunishi Y., Kono H., Adachi J., Fukuda S.,
 Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamataka I.,
 Saito T., Okazaki Y., Gotohori T., Bono H., Katsukawa T., Saito R.,
 Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
 Fleischmann W., Gaasterland T., Gissi C., King B., Kochwa H.,
 Kuehl P., Lewis S., Matsuo Y., Nakado I., Pesole G., Quackenbush J.,
 Schriml L.M., Stauff F., Suzuki R., Tomita M., Wagner L., Washio T.,
 Sakai K., Okido T., Furuno M., Kono H., Baldarelli R., Barsh G.,
 Blake J., Botelli D., Bolunga N., Carninci P., de Bonaldo M.F.,
 Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
 Glastitch S., Hill D., Hofmann M., Hume D.A., Kamita M., Lee N.H.,
 Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,
 Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
 Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
 Suzuki H., Toyokawa K., Wang K.H., Welter C., Whitaker C., Wilming L.,
 Wysshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohetsuki S.,
 Hayashizaki Y.,
 RT "Functional annotation of a full-length mouse cDNA collection.";
 RL Nature 409:685-690(2001).
 CC -1- SUBCELLULAR LOCATION: Secreted (Potential).
 CC -1- SIMILARITY: Belongs to the cystatin family.

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DR EMBL; AK020300; BAB32061.1; -
 DR HSSP; P01034; 1G96.
 DR MGD; MGI:1925490; Cst11.
 DR InterPro; IPR000010; Cystatin.
 DR Pfam; PF00031; Cystatin; 1.
 DR SMART; SM00043; CY; 1.
 DR PROSITE; PS00287; CYSTATIN; FALSE_NEG.
 DR Thiol protease inhibitor; Signal.
 DR SIGNAL 1 28
 FT CHAIN 29 139 CYPSTATIN 11.
 FT SITE 76 80 SECONDARY AREA OF CONTACT (POTENTIAL).
 FT DISULFID 94 102 BY SIMILARITY.
 FT CARBOHYD 115 135 N-LINKED (GLCNAC. .) (POTENTIAL).
 FT 134 134 /FTid=VSP_001260.
 SQ SEQUENCE 139 AA; 16217 MM; F228D9815FA32640 CRC64;

Query Match 56.8%; Score 155; DB 1; Length 139;
 Best Local Similarity 59.6%; Pred. No. 1,8e-13;
 Matches 28; Conservative 8; Mismatches 11; Indels 0; Gaps 0;

QY 2 VEMQMTTCKPPTNCVPERELHKOVNCFPSFAVPMWFOYILNK 48
 DB 87 VEMQMTTCKPPTNCVPERELHKOVNCFPSFAVPMWFOYILNK 133

RESULT 3
 CST8_MOUSE
 ID CST8_MOUSE STANDARD; PRT; 142 AA.
 AC P32766; O89102;
 DT 01-OCT-1993 (Rel. 27, Created)
 DT 30-MAY-2000 (Rel. 39, Last sequence update)
 DT 28-FEB-2003 (Rel. 41, Last annotation update)
 DE Cystatin-related epididymal spermatozoal protein precursor (Cystatin-
 DE related epididymal specific protein) (Cystatin 8).
 GN CST8 OR CRES.
 OS Mus musculus (Mouse).
 OC Eukaryota; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Mus.
 OX NCBI_TaxID=10090;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN=C3H; and CD-1;
 RX MEDLINE=99247899; PubMed=10229662;
 RA Cornwall G.A., Hala N., Sutton H.G.,
 RT "Structure, alternative splicing and chromosomal localization of the
 RT cystatin-related epididymal spermatozoal gene.";
 RL Biochem. J. 340:85-93(1999).
 RN [2]
 RP SEQUENCE OF 4-142 FROM N.A.
 RC TISSUE=Epididymis;
 RX MEDLINE=93078799; PubMed=1280328;
 RA Cornwall G.A., Orgebin-Crist M.-C., Hann S.R.,
 RT "The CRES gene: a unique testis-regulated gene related to the cystatin
 RT family is highly restricted in its expression to the proximal region
 RT of the mouse epididymis.";
 RL Mol. Endocrinol. 6:1653-1664(1992).
 RL -1- FUNCTION: Performs a specialized role during sperm development and
 CC maturation.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- TISSUE SPECIFICITY: Proximal caput region of the epididymis. Lower
 CC expression in the testis. Within the testis it is localized to the
 CC elongating spermatids, whereas within the epididymis it is
 CC exclusively synthesized by the proximal caput epithelium.
 CC -1- INDUCTION: Testicular factors or hormones other than androgens
 CC present in the testicular fluid may be involved in the regulation

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-----
DR EMBL; AF090692; AAC6317.1; -.
DR HSSP; P01034; 1996.
DR InterPro; IPR000010; Cystatin.
DR Pfam; PF00031; cystatin; 1.
DR SMART; SM00043; Cy; 1.
KM Thiol protease inhibitor; Signal.
FT SIGNAL 1 19
FT CHAIN 20 142
FT FT
FT FT
FT SITE 77 81
FT DISULFID 95 105
FT DISULFID 119 139
FT CARBOHYD 100 100
SQ SEQUENCE 142 AA; 16246 MW; FB873FAA6BCA834 CRC64;
Query Match 36.8%; Score 100.5; DB 1; Length 142;
Best Local Similarity 37.3%; Pred. No. 2.9e-06;
Matches 19; Conservative 16; Mismatches 13; Indels 3; Gaps 2;
QY 1 NVEWQMTTCQKP--ETTCVPOER-ELHKOVNCFPSFAVWPQYKILNK 48
Db 87 DVQSRNCRKPLNTNENCIPQKNPKLEKTLSCGFVLGALPMNGEFDLPSLK 137
-----
RESULT 5
CSTL_HUMAN
ID CSTL_HUMAN STANDARD; PRT; 165 AA.
AC OSHT14;
DT 28-FEB-2003 (Rel. 41, Created)
DT 28-FEB-2003 (Rel. 41, Last sequence update)
DT 28-FEB-2003 (Rel. 41, Last annotation update)
DE Cystatin-like 1 precursor.
GN CSTL1.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniota; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Hominiidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=2638749; PubMed=11780052;
RA Deloukas P, Matthews L.H., Ashurst J., Burton J., Gilbert J.G.R.,
RA Jones M., Stavrides G., Almeida J.P., Babbage A.K., Bagguley C.L.,
RA Bailey J., Barlow K.F., Bates K.N., Beard L.M., Beare D.M.,
RA Beasley O.P., Bird C.P., Blakey S.B., Bridgeman A.M., Brown A.J.,
RA Buck D., Burrill W.D., Butler A.P., Carder C., Carter N.P.,
RA Chapman J.C., Clamp M., Clark G., Clark L.N., Clak S.Y., Clee C.M.,
RA Clegg S., Cobley V.E., Collier R.E., Connor R.B., Cobby N.R.,
RA Coulson A., Coville G.J., Deadman R., Dhami P.D., Dunn M.,
RA Ellington A.G., Frankland J.A., Frazer A., French L., Garner P.,
RA Grafham D.V., Griffiths C., Griffiths M.N.D., Gwilliam R., Hall R.B.,
RA Hammond S., Harley J.L., Heath P.D., Ho S., Holden J.L., Howden P.J.,
RA Huckle E., Hunt A.R., Hunt S.B., Jekosch K., Johnson C.M., Johnson D.,
RA Kay M.P., Kimberley A.M., King A., Knights A., Laird G.K., Lawlor S.,
RA Letavessalho M.H., Leverisha M.A., Lloyd C., Lloyd D.M., Lovell J.D.,
RA Marsh V.L., Martin S.L., McConachie L.J., McHay K., McMurray A.A.,
RA Milne S.A., Mistry D., Moore M.J.F., Mullikin J.C., Nickerson T.,
RA Oliver K., Parker A., Patel R., Pearce T.A.V., Peck A.I.,
RA Phillimore B.J.C.T., Pratchallangam S.R., Plumb R.W., Ramway H.,
RA Rice C.M., Ross M.T., Scott C.E., Sehra H.K., Showkeen R., Sims S.,
RA Skuse C.D., Smith M.L., Soderlund C., Steward C.A., Sultson J.E.,
RA Swann R.M., Symmore N., Taylor R., Tee L., Thomas D.W., Thorpe A.,
RA Tracey A., Tromans A.C., Vaudin M., Wall M., Wallis J.M.,
RA Whitehead S.L., Whitaker P., Willey D.L., Williams L., Williams S.A.,
RA Wilming L., Wray P.W., Hubbard T., Durbin R.M., Bentley D.R., Beck S.,
RA Rogers J.;
RL "The DNA sequence and comparative analysis of human chromosome 20."
RL Nature 414:865-871(2001).
CC -I- SUBCELLULAR LOCATION: Secreted (Potential).
CC -I- SIMILARITY: Belongs to the cystatin family.
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OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.
 OC NCBI_TaxID=9606;
 RN
 RP SEQUENCE FROM N.A.
 RX MEDLINE=21638749; PubMed=11780052;
 RA Deloukas P., Matthews G., Alameda J.P., Babbage A.K., Bagnall C.L.,
 RA Jones M., Stavrides G., Almeida J.P., Bagnall C.L., Bagnall C.L.,
 RA Bailey J., Barlow K.F., Bates K.N., Beard L.M., Beare D.M.,
 RA Beasley O.P., Bird C.P., Blakey S.E., Bridgeman A.M., Brown A.J.,
 RA Buck D., Burrill W.D., Butler A.P., Carder C., Carter N.P.,
 RA Chapman J.C., Clamp M., Clark G., Clark S.Y., Clee C.M.,
 RA Clegg S., Cobley V.E., Collier R.E., Connor R.E., Cobby N.R.,
 RA Coulson A., Coville G.J., Deadman R., Dhani P.D., Dunn M.,
 RA Ellington A.G., Frankland J.A., Fraser A., French L., Garner P.,
 RA Grafton D.V., Griffiths C., Griffiths M.N.D., Gwilliam R., Hall R.E.,
 RA Hammond S., Harley J.L., Heath P.D., Ho S., Holden J.L., Howden P.J.,
 RA Huckle E., Hunt A.R., Hunt S.E., Jekosch K., Johnson C.M., Johnson D.,
 RA Kay M.P., Kimberley A.M., King A., Knights A., Laird G.K., Lawlor S.,
 RA Leveson-Gilho M.H., Leverisha M.A., Lloyd C., Lloyd D.M., Lovell J.D.,
 RA Marsh V.L., Martin S.L., McComachie L.J., McElay K., McMurray A.A.,
 RA Milne S.A., Mistry D., Moore M.J.F., Mullikin J.C., Nickerson T.,
 RA Oliver K., Parker A., Patel R., Pearce T.A.V., Peck A.I.,
 RA Phillimore B.J.C.T., Prathalingam S.R., Plumb R.W., Ramsay H.,
 RA Rice C.M., Ross M.T., Scott C.E., Sehra H.K., Showkhen R., Sims S.,
 RA Skuce C.D., Smith M.L., Soderlund C., Steward C.A., Suleston J.E.,
 RA Svann R.M., Symamore N., Taylor R., Tee L., Thomas D.W., Thorpe A.,
 RA Tracey A., Tromans A.C., Vaudin M., Wall M., Wallis J.M.,
 RA Whitehead S.L., Whitaker P., Willey D.L., Williams L., Williams S.A.,
 RA Wilmshurst L., Wray P.W., Hubbard T., Durbin R.M., Bentley D.R., Beck S.,
 RA Rogers J.;
 RT "The DNA sequence and comparative analysis of human chromosome 20.";
 RL Nature 414:865-871(2001).
 RN
 RP SEQUENCE FROM N.A.
 RC TISSUE=Brain;
 RX MEDLINE=22388257; PubMed=12477932;
 RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
 RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
 RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
 RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
 RA Datchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
 RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
 RA Brownstein M.J., Ustin T.B., Toshitsuki S., Casarini P., Prange C.,
 RA Rana S.S., Loquiano N.A., Peters G.J., Abramson R.D., Mullaly S.J.,
 RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
 RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulik S.W.,
 RA Vallat D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
 RA Pabby J., Helton E., Kettman M., Madan A., Rodriguez S., Sanchez A.,
 RA Whitting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
 RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
 RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
 RA Butcherfield Y.S.N., Krzywinski M.I., Skalska U., Smalins D.E.,
 RA Schnerch A., Schein J.E., Jones S.J.M., Maria M.A.;
 RT "Generation and initial analysis of more than 15,000 full-length
 human and mouse cDNA sequences.";
 RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
 CC -1- SUBCELLULAR LOCATION: Secreted (Potential).
 CC -1- SIMILARITY: Belongs to the cystatin family.
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DR Pfam; PF00031; cystatin; 1.
 DR SMART; SM00043; CY; 1.
 KW Thiol protease inhibitor; Signal.
 FT SIGNAL 1
 FT CHAIN 29 147 POTENTIAL.
 FT DISULFID 98 108 CYSSTATIN 9-LIKE.
 FT DISULFID 122 142 BY SIMILARITY.
 FT CARBOHYD 117 117 N-LINKED (GLCNAC. . .) (POTENTIAL).
 FT CARBOHYD 139 139 N-LINKED (GLCNAC. . .) (POTENTIAL).
 SQ SEQUENCE 147 AA; 17276 MW; 3A3286FADCA4FD6 CRC64;
 Query Match 29.5%; Score 80.5; DB 1; Length 147;
 Best Local Similarity 40.0%; Pred. No. 0.0013;
 Matches 18; Conservative 6; Mismatches 18; Indels 3; Gaps 2;
 Oy 7 TTCK--PEPTTCYPOE-RELHKNVNCPSVFAVPEQYKILNK 48
 Db 96 TRCGKFEDIDNCHFGFSTELNMTFTCFPTISRPMTQPSLANK 140
 RESULT 8
 CYT CHICK STANDARD; PRT; 139 AA.
 AC P01038;
 DT 21-JUN-1986 (Rel. 01, Created)
 DT 01-OCT-1989 (Rel. 12, Last sequence update)
 DT 28-FEB-2003 (Rel. 41, Last annotation update)
 DE Cystatin precursor (Egg-white cystatin).
 OS Gallus gallus (Chicken).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
 OC Gallus.
 OC NCBI_TaxID=9031;
 RN
 RP SEQUENCE FROM N.A.
 RX MEDLINE=90008873; PubMed=2793849;
 RA Cotella R., Sakaguchi Y., Nagase H., Bird J.W.C.;
 RT "Chicken egg white cystatin. Molecular cloning, nucleotide sequence,
 RT and tissue distribution.";
 RL J. Biol. Chem. 264:17164-17169(1989).
 RN
 RP SEQUENCE OF 24-139.
 RX MEDLINE=84118055; PubMed=6712597;
 RA Schwabe C., Anastasi A., Crow H., McDonald J.K., Barrett A.J.;
 RT "Cystatin. Amino acid sequence and possible secondary structure.";
 RL Biochem. J. 217:813-817(1984).
 RN
 RP SEQUENCE OF 24-139.
 RX MEDLINE=84110059; PubMed=6662498;
 RA Turk V., Brzin J., Longier M., Ritonja A., Eropkin M., Borchart U.,
 RA Machleidt W.;
 RT "Protein inhibitors of cysteine proteinases. III. Amino-acid sequence
 RT of cystatin from chicken egg white.";
 RL Hoppe-Seyler's Z. Physiol. Chem. 364:1487-1496(1983).
 RN
 RP CHARACTERIZATION OF PROTEIN.
 RX MEDLINE=93256421; PubMed=6409085;
 RA Anastasi A., Brown M.A., Kemhavi A.A., Nicklin M.J.H., Sayers C.A.,
 RA Sunter D.C., Barrett A.J.;
 RT "Cystatin, a protein inhibitor of cysteine proteinases. Improved
 RT purification from egg white, characterization, and detection in
 RT chicken serum.";
 RL Biochem. J. 211:129-138(1983).
 RN
 RP DISULFIDE BONDS.
 RA Grubb A., Loeffberg H., Barrett A.J.;
 RT "The disulphide bridges of human cystatin C (gamma-trace) and chicken
 RT cystatin.";
 RL FEBS Lett. 170:370-374(1984).
 RN
 RP PHOSPHORYLATION.
 RX MEDLINE=89252033; PubMed=2721673;
 RA Laber B., Kriegstein K., Henschen A., Koe J., Turk V., Huber R.,

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RA  "The cysteine proteinase inhibitor chicken cystatin is a
RT  phosphoprotein."
RL  PDBS Letc. 248:162-168(1989).
RN  [7]
RP  X-RAY CRYSTALLOGRAPHY (2.0 ANGSTROMS).
RX  MEDLINE=89052676; PubMed=3191914;
RA  Bode W., Engh R., Musil D., Thiele U., Huber R., Karshikov A.,
RA  Birn J., Kos J., Turk V.;
RT  "The 2.0 A X-ray crystal structure of chicken egg white cystatin and
RT  its possible mode of interaction with cysteine proteinases."
RL  EMO J. 7:2593-2599(1988).
RN  [8]
RP  STRUCTURE BY NMR.
RX  MEDLINE=94087719; PubMed=8263912;
RA  Dieckmann T., Mitschang L., Hofmann M., Kos J., Turk V.,
RA  Auerwald E.A., Jeanick R., Oeschkat H.;
RT  "The structures of native phosphorylated chicken cystatin and of a
RT  recombinant unphosphorylated variant in solution."
RL  J. Mol. Biol. 234:1048-1059(1993).
CC  -1- FUNCTION: This protein binds tightly to and inhibits a variety of
CC  thiol proteases including ficin, papain, and cathepsins B, C, H,
CC  and L. Although isolated from egg white, it is also present in
CC  serum.
CC  -1- SIMILARITY: Belongs to the cystatin family.
CC  -----
CC  This SWISS-PROT entry is copyright. It is produced through a collaboration
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CC  -----
DR  EMBL; J05077; AAA48744.1; -.
DR  PIR; A34456; UDCH.
DR  PDB; 1CEW; 31-JAN-94.
DR  PDB; 1A67; 27-MAY-98.
DR  PDB; 1A90; 17-JUN-98.
DR  InterPro; IPR000010; Cystatin.
DR  Pfam; PF00031; cystatin; 1.
DR  SMART; SM00043; CY; 1.
DR  PROSITE; PS00287; CYSTATIN; 1.
KW  Thiol protease inhibitor; Phosphorylation; Signal; 3D-structure.
FT  SIGNAL 1 23
FT  CHAIN 24 139
FT  ACT_SITE 32 32 CYSTATIN.
FT  SITE 76 80 REACTIVE SITE.
FT  DISULFID 94 104 SECONDARY AREA OF CONTACT.
FT  DISULFID 118 138
FT  MOD_RES 103 103
FT  STRAND 35 36 PHOSPHORYLATION (PARTIAL).
FT  TURN 39 40
FT  TURN 42 51
FT  HELIX 52 52
FT  TURN 53 56
FT  HELIX 57 58
FT  TURN 63 77
FT  STRAND 81 95
FT  STRAND 96 97
FT  TURN 99 100
FT  TURN 101 108
FT  HELIX 115 125
FT  STRAND 126 129
FT  TURN 130 139
SQ  SEQUENCE 139 AA; 15287 MW; D92D1131C4D37891 CRC64;
Query Match 29.1%; Score 79.5; DB 1; Length 139;
Best Local Similarity 37.5%; Pred. No. 0.0017;
Matches 18; Conservative 8; Mismatches 19; Indels 3; Gaps 2;

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Db      VEIGRTTCPKRSSGDLQSCFHEDEPEEMAKYTTCTFFVVISIPWLNIQIKLL   134
RESULT 9
CYT_COTJA ID CYT_COTJA STANDARD; PRT; 116 AA.
AC PA1061;
DT 15-JUL-1998 (Rel. 36, Created)
DT 15-JUN-1998 (Rel. 36, Last sequence update)
DT 28-FEB-2003 (Rel. 41, Last annotation update)
DB Cystatin (Egg-white cystatin).
OS Coturnix coturnix japonica (Japanese quail).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
CC Anchoarea; Actinoptera; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
CX NCBI_TaxID=93934; [1]
RN RNP
RP SEQUENCE.
RC TISSUE=Egg white; PubMed=9276465;
RA Gerhardt B., Engn R.A., Mentele R., Eckerkorn C., Torquato R.,
RA Wittman J., Kolb H.J., Machleidt W., Fritz H., Auerswald E.A.;
RT "Oval cystatin: isolation and characterisation of a new member of
the cystatin family and its hypothetical interaction with cathepsin
B."; Lett. 412:551-558(1997);
RL FEBS -FUNCTION: This protein binds tightly to and inhibits papain and
CC cathepsin B.
CC CC -1 SIMILARITY: Belongs to the cystatin family.
DR InterPro: IPR000010; Cystatin.
DR Pfam; PF00031; Cystatin; 1.
DR SMART; SMO0043; Cy; 1.
DR PROSITE; PS00287; CYSTATIN; 1.
KW Thiol protease inhibitor; Phosphorylation.
FT ACT SITE 9 REACTIVE SITE.
FT SITE 53 SECONDARY AREA OF CONTACT.
FT DISULEID 71 81
FT DISULEID 95 115
FT MOD_RSS 80 80 PHOSPHORYLATION.
SQ SEQUENCE 116 AA; 13093 MW; 4824621053A2F70 CRC64;

Query March 28.8%; Score 78.5; DB 1; Length 116;
Best local similarity 37.5%; Pred. No. 0.0019;
Matches 18; Conservative 8; Mismatches 19; Indels 3; Gaps 2;

Qy    2 VEQMWTICOK--PETINC-VPOERELHKOVNCFESVEAVPWFEGYKII_46
       |||::|||::|:|:|:|:|:|:|:|:|:|:~::~|||:|:|:
Db     64 VEIGRTTCPKRSADLGSCFHEDPEEMAKYTTCTNFVVYSIPLWNIQIKLL_111


RESULT 10
CYTC_RATIO AC PI4841;
CYTC_RATIO DT 01-APR-1990 (Rel. 14, Created)
CYTC_RATIO DT 01-APR-1990 (Rel. 14, Last sequence update)
CYTC_RATIO DT 28-FEB-2003 (Rel. 41, Last annotation update)
DB DE Cystatin C precursor (Fragment).
OS GN CST3.
OS OS Rattus norvegicus (Rat.).
OC OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
CX CX NCBI_TaxID=10116; [1]
RN RN RNP
RP RP SEQUENCE FROM N.A.
RC RC STRAIN=Buffalo;
RX RX MEDLINE=90092122; PubMed=2689174;
RA Cole T., Dickson P.W., Esnard F., Averill F., Ribridiger G.,
RA Gaubier F., Schreiber G.;
RT "The cDNA structure and expression analysis of the genes for the
cysteine proteinase inhibitor cystatin C and for beta 2-microglobulin
in rat brain.";
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NCNT3.
OS Saimiri sciureus (Common squirrel monkey).
CC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Platyrrhini; Cebidae; Saimiri.
XX NCBI_TaxID=9521;
RN [1]
RP SEQUENCE FROM N.A.
EX MEDLINE=97054523; PubMed=8698820;
RA Wei L.H., Walker L.C., Levy B.;
RT "Cystatin C. Icelandic-like mutation in an animal model of cerebrovascular beta-amyloidosis.";
RL Stroke 27:2080-2085(1996).
CC -I- FUNCTION: As an inhibitor of cysteine proteinases, this protein is thought to serve an important physiological role as a local regulator of this enzyme activity.
CC -I- SIMILARITY: Belongs to the cystatin family.
-----
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DR EMBL; U52028; AAB64051.1; -.
DR HSSP; P01034; I596.
DR InterPro; IPROO0010; Cystatin.
DR Pfam; PF00031; cystacin; 1.
DR SMART; SM00043; CY; 1.
DR PROSITE; PS00287; CYSTATIN_1.
KW Thiol protease inhibitor; Amyloid; Signal.
FT SIGNAL          1      26     BY SIMILARITY.
FT CHAIN           27    146     CYSTATIN C.
FT ACT_SITE        31    37     REACTIVE SITE.
FT SITE            81    85     SECONDARY AREA OF CONTACT.
FT DISULFID        99   109     BY SIMILARITY.
FT DISULFID       123   143     BY SIMILARITY.
SQ SEQUENCE         146 AA; 15946 MW; 08196353C0J06AA3 CRC64;
Query Match              28.0%; Score 76.5; DB 1; Length 146;
Best Local Similarity 40.5%; Pred No. 0.0044;
Matches 17; Conservative 7; Mismatches 15; Indels 3; Gaps 2;

QY      1 NVEMQTTCOK--PETNVCVPOER-SIAKOVCFPSVAVPW 39
Db      91 DVEMGRTCTCKNQPNLDNCPFHGDPHLKRKAFCFSQLYSVPW 132
               ||| |||| ||| :|:::|||
RESULT 12
CYTS_HUMAN STANDARD; PRS; 141 AA.
AC P01036; O9UB15; Q9UCS9;.
DT 21-JUN-1986 (Rel. 01, Created)
DT 01-JUL-1993 (Rel. 26, Last sequence update)
DT 15-MAR-2004 (Rel. 43, Last annotation update)
DE Cystatin S precursor (Salivary acidic protein-1) (Cystatin SA-IIII) .
GN CST4.
OS Homo sapiens (Human) .
CC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Hominiidae; Homo.
OX NCBI_Taxid=9606;
RN [1]
RP SEQUENCE FROM N.A.
RC TISUSU-Submandibular gland;
RE MEDLINE=91378918; PubMed=1898352;
RX Bobek L.A., Aguirre A., Levine W.J.;
RA "Human salivary cystatin S. Cloning, sequence analysis, hybridization in situ and immunocytochemistry.";
RT Biochem. J. 278:627-635(1991).
RN [2]
RP SEQUENCE FROM N.A.
RA Salton E., Isenmura S., Sanada K., Ohnishi K.
```


RT "Characterization of two members (CST4 and CST5) of the cystatin gene
RT family and molecular evolution of cystatin genes.";
RL Agents Actions 38:340-348(1992).
RN [3]
RP SEQUENCE FROM N.A.
RA Dickinson D.P., Hewett-Emmett D., Thiesse M.;
RT "Identification of complex patterns of differential expression in
RT epithelial cell populations during the evolution of type 2 cystatin
RT genes.";
RL Submitted (NOV-2000) to the EMBL/Genbank/DBJ databases.
RN [4]
RP SEQUENCE FROM N.A.
RX MEDLINE=21638749; PubMed=11780052;
RA Deloukas P., Matthews L.H., Ashurst J., Burton J., Gilbert J.G.R.,
RA Jones M., Scavrides G., Almeida J.P., Babbage A.K., Bagguley C.L.,
RA Bailey J.P., Barlow K.F., Bates K.N., Beard L.M., Beare D.M.,
RA Beasley O.P., Bird C.P., Blakey S.E., Bridgeman A.M., Brown A.J.,
RA Buck D., Burrill W.D., Butler A.P., Carder C., Carter N.P.,
RA Chapman J.C., Clamp M., Clark G., Clark L.N., Clark S.Y., Clee C.M.,
RA Clegg S., Cobley V.E., Collier R.E., Connor R.E., Coty N.R.,
RA Coulson A., Coville G.J., Deadman R., Dhani P.D., Dunn M.,
RA Ellington A.G., Frankland J.G., Fraser A., French L., Garner P.,
RA Graffham D.V., Griffiths C., Griffiths M.N.D., Gwilliam R., Hall R.E.,
RA Hammond S., Harley J.L., Heath P.D., Ho S., Holden J.L., Howden P.J.,
RA Huckle E., Hunt A.R., Hunt S.E., Jekosch K., Johnson C.M., Johnson D.,
RA Kay M.P., Kimberley M., King A., Knights A., Laird D.M., Lawlor S.,
RA Levanon-Saib H., Leverhwa M.A., Lloyd C., Lloyd D.M., Lovell J.D.,
RA Marsh V.L., Martin S.L., McConmachie L.J., Mcley K., McMurtry A.A.,
RA Milne S.A., Mistry D., Moore M.J.F., Mullikin J.C., Nickerson T.,
RA Oliver K., Parker A., Patel R., Pearce T.A.V., Peck A.I.,
RA Phillimore B.J.C.T., Prethalingam S.R., Plumb R.W., Ramsey H.,
RA Rice C.M., Rose M.T., Scott C.E., Sehra H.K., Showkeen R., Sims S.,
RA Skuse C.D., Smyth M.L., Soderlund C., Steward C.A., Sultston J.E.,
RA Swann R.M., Symmore N., Taylor R., Tee L., Thomas D.W., Thorpe A.,
RA Tracey A., Tromans A.C., Vaudin M., Wall M., Wallis J.M.,
RA Whitehead S.L., Whiteaker P., Willey D.L., Williams L., Williams S.A.,
RA Wilmfing L., Wray P.W., Hubbard T., Durbin R.M., Bentley D.R., Beck S.,
RA Rogers J.;
RT "The DNA sequence and comparative analysis of human chromosome 20.";
RL Nature 414:865-871(2001).
RN [5]
RP SEQUENCE OF 21-51.
RX MEDLINE=87270697; PubMed=3496880;
RA Hawke D.H., Yuan P.W., Wilson K.J., Hunkpiller M.W.;
RT "Identification of a long form of cystatin from human saliva by rapid
RT microbore HPLC mapping.";
RL Biochem. Biophys. Res. Commun. 145:1248-1253(1987).
RN [6]
RP SEQUENCE OF 21-55, AND PHOSPHORYLATION OF SER-23.
RC TISSUE=Saliva;
RX MEDLINE=92082469; PubMed=1747107;
RA Ranaasubbu N., Reddy M.S., Bergey E.J., Harasathy G.G., Soni S.-D.,
RA Levine M.J.;
RT "Large-scale purification and characterization of the major
RT phosphoproteins and mucins of human submandibular-sublingual saliva.";
RL Biochem. J. 280:341-352(1991).
RN [7]
RP SEQUENCE OF 21-36, AND PHOSPHORYLATION OF SER-21 AND SER-23.
RC TISSUE=Saliva;
RX MEDLINE=92138674; PubMed=1778899;
RA Isewura S., Satoh E., Sanada K., Minakata K.;
RT "Identification of full-sized forms of salivary (S-type) cystatins
RT (cystatin SN, cystatin SA, cystatin S, and two phosphorylated forms of
RT cystatin S) in human whole saliva and determination of phosphorylation
RT sites of cystatin S.";
RL J. Biochem. 110:648-654(1991).
RN [8]
RP SEQUENCE OF 21-36, AND PHOSPHORYLATION OF SER-23.
RC TISSUE=Saliva;
RX MEDLINE=92074898; PubMed=1741693;
RA Johnson M., Richardson C.F., Bergey E.J., Levine M.J.,
RA Nancollas G.H.;
RT "The effects of human salivary cystatins and scatherin on

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RT      hydroxyapatite crystallization."
RL Arch. Oral Biol. 36:631-636(1991).
RN [9]
RP SEQUENCE OF 29-141.
RX MEDLINE=85054716; PubMed=6501254;
RA Isemura S., Satoh E., Sanada K.;
RT "Isolation and amino acid sequence of SAP-1, an acidic protein of
   human whole saliva, and sequence homology with human gamma-tracee.",
RL Biochem. 96:489-498(1984).
RN [10]
RP INHIBITOR SPECIFICITY.
RX MEDLINE=85104877; PubMed=6394600;
RA Isemura S., Satoh E., Ito S., Isemura M., Sanada K.;
RT "Cystatin S: a cysteine proteinase inhibitor of human saliva.",
RL J. Biochem. 96:1311-1314(1984).
RN [11]
RP PHOSPHORYLATION.
RX MEDLINE=91378515; PubMed=1898055;
RA Larkin M.S., Jensen J.L., Setayesh M.R., Troxler R.F., Oppenheim F.G.;
RT "Salivary cystatin SA-II, a potential precursor of the acquired
   enamel pellicle, is phosphorylated at both its amino- and
   carboxyl-terminal regions.";
RA Arch. Biochem. Biophys. 288:664-670(1991).
CC -I- FUNCTION: This protein strongly inhibits papain and ficin,
   partially inhibits stem bromelain and bovine cathepsin C, but does
   not inhibit porcine cathepsin B or clostripain. Papain is
   inhibited noncompetitively.
CC -I- TISSUE SPECIFICITY: Found in saliva, tears, urine and seminal
   fluid.
CC -I- PTM: PHOSPHORYLATED AT BOTH ITS AMINO- AND CARBOXYL-TERMINAL
   REGIONS.
CC -I- SIMILARITY: Belongs to the cystatin family.
-----
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DR EMBL; X54667; CAA38478.1; -.
DR EMBL; S51222; AAB24493.1; -.
DR EMBL; S51214; AAB24493.1; JOINED.
DR EMBL; S51219; AAB24493.1; JOINED.
DR EMBL; AF319565; AAU11571.1; -.
DR EMBL; AL359433; CAC07196.1; -.
DR PIR; S17657; UDHUPL.
DR HSSP; P01034; 1G96.
DR Genew; HGNC:2476; CST4.
DR MIM; 123857; -.
DR InterPro; IPRO00010; Cystatin.
DR Pfam; PF00031; cystatin, 1.
DR SMART; SM00043; CY; 1.
DR PROSITE; PS00287; CYSTATIN, 1.
KW Thiol protease inhibitor, Phosphorylation, Signal, Multigene family.
FT SIGNAL 1 20
FT CHAIN 1 141 CYSTATIN S.
FT ACT SITE 32 32 REACTIVE SITE.
FT SITE 76 80 SECONDARY AREA OF CONTACT.
FT DISULFID 94 104 BY SIMILARITY.
FT DISULFID 118 138 BY SIMILARITY.
FT MOD_RES 21 21 PHOSPHORYLATION (PARTIAL).
FT MOD_RES 23 23 PHOSPHORYLATION (PARTIAL).
FT CONFLICT 135 135 N -> D (IN REF. 5).
SQ SEQUENCE 141 AA; 16214 MW; 65B1EBBB8074DEA6 CRC64;
Query Match 27.7%; Score 75.5; DB 1; Length 141;
Best Local Similarity 34.0%; Pred.No. 0.0058;
Matches 17; Conservative 10; Mismatches 20; Indels 3; Gaps 2;

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DB 86 DVEIGRTCTKSGPNLDTCAFHQPELOKQKQLCSFEIYEVWEDRMSLVN 135

RESULT 13

AC CYTT HUMAN STANDARD; PRT; 141 AA.

AC P09238; 09UC07;

DT 01-MAR-1989 (Rel. 10, Created)

DT 01-MAR-1989 (Rel. 10, Last sequence update)

DT 28-FEB-2003 (Rel. 41, Last annotation update)

DE Cystatin SA precursor (Cystatin S5).

GN CST2.

OS Homo sapiens (Human).

OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

OC Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

OX NCBI_TaxID=9606;

RP [1]

RP SEQUENCE FROM N.A.

RX MEDLINE=8185836; PubMed=3446578;

RA Satoh E., Kim H.-S., Smithies O., Maeda N.;

RT "Human cysteine-proteinase inhibitors: nucleotide sequence analysis of three members of the cystatin gene family.";

RL Gene 61:329-338(1987).

RN [2]

RN SEQUENCE FROM N.A.

RX MEDLINE=21638749; PubMed=11780052;

RA Deloukas P., Mathews L.H., Ashurst J., Burton J., Gilbert J.G.R., Jones M., Stavridis G., Almeida J.P., Babbage A.K., Bagguley C.L., Bailey J., Barlow K.F., Bates K.N., Beard L.M., Beare D.M., Beasley O.P., Bird C.P., Blakey S.E., Bridgeman A.M., Brown A.J., Buck D., Burrill W.D., Butler A.P., Carder C., Carter N.P., Chapman J.C., Clamp M., Clark G., Clark L.N., Clark S.Y., Clee C.M., Clegg S., Cobley V.E., Collier R.E., Connor R.E., Corby N.R., Coulson A.G., Coville G.J., Deadman R., Dhami P.D., Dunn M., Ellington A.G., Frankland J.A., Fraser A., French L., Garner P., Graffham D.V., Griffiths C., Griffiths M.N.D., Gwilliam R., Hall R.E., Hammond S., Harley J.L., Heath P.D., Ho S., Holden J.L., Hovden P.J., Huckle E., Hunt A.R., Hunt S.E., Jekosch K., Johnson C.M., Johnson D., Kay M.P., Kimberley A.M., King A., Knights A., Laird G.K., Lawlor S., Levesley M.H., Leversha M.A., Lloyd C., Lloyd D.M., Lovell J.D., Marsh V.L., Martin S.L., McConachie L.J., McHay K., McMurray A.A., Malm S.A., Mistry D., Moore M.J.F., Mullikin J.C., Nickerson T., Oliver K., Parker A., Patel R., Pearce T.A.V., Peck A.I., Phillimore B.J.C.T., Prathalingam S.R., Plumb R.W., Ramsey H., Rice C.M., Rose M.T., Scott C.E., Sehra H.K., Showkhen R., Sims S., Stuce C.D., Smith M.L., Soderlund C., Steward C.A., Sultson J.E., Swan R.M., Sycamore N., Taylor R., Tee L., Thomas D.W., Thorpe A., Tracey A., Tromans A.C., Vaudin M., Wall M., Wallis J.M., Whitehead S.L., Whitaker P., Willey D.L., Williams L., Williams S.A., Wilming L., Wray P.W., Hubbard T., Durbin R.M., Bentley D.R., Beck S., Rogers J.;

RT "The DNA sequence and comparative analysis of human chromosome 20.";

RL Nature 414:665-671(2001).

RN [3]

RN SEQUENCE OF 21-40.

RC TISSUE=Saliva;

RX MEDLINE=92138674; PubMed=1778989;

RA Isemura S., Satoh E., Sanada K., Minakata K.;

RT "Identification of full-sized forms of salivary (S-type) cystatins (cystatin SN, cystatin SA, cystatin S, and two phosphorylated forms of cystatin S) in human whole saliva and determination of phosphorylation sites of cystatin S.";

RL J. Biochem. 110:648-654(1991).

RN [4]

RP SEQUENCE OF 25-141.

RX MEDLINE=8139220; PubMed=3436950;

RA Isemura S., Satoh E., Sanada K.;

RT "Characterization and amino acid sequence of a new acidic cysteine proteinase inhibitor (cystatin SA) structurally closely related to cystatin S, from human whole saliva.";

RL J. Biochem. 102:693-704(1987).

RN [5]

RP PRELIMINARY SEQUENCE OF 25-141.

RA Isemura S., Satoh E., Sanada K., Isemura M., Ito S.;

RT "Characterization and amino acid sequence of a new acidic cysteine proteinase inhibitor (cystatin SA) structurally closely related to cystatin S, from human whole saliva.";

RL (in) Turk V. (eds.);

RL Cysteine proteinases and their inhibitors, pp.497-505, Walter de Gruyter, Berlin and New York (1986).

RN [6]

RP SEQUENCE OF 25-141 FROM N.A.

RX MEDLINE=99076505; PubMed=3202964;

RA Satoh E., Isemura S., Sanada K., Kim H.-S., Smithies O., Maeda N.;

RT "Cystatin superfamily. Evidence that family II cystatin genes are evolutionarily related to family III cystatin genes.";

RL Biol. Chem. Hoppe-Seyler 369:191-197(1988).

CC -1- FUNCTION: Thiol protease inhibitor.

CC -1- SUBCELLULAR LOCATION: Secreted.

CC -1- SIMILARITY: Belongs to the cystatin family.

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CC -----

CC EMBL: M19673; AAA36116.1; -.

DR EMBL: M19671; AAA36116.1; JOINED.

DR EMBL: M19672; AAA36116.1; JOINED.

DR EMBL: AL591074; CAC94784.1; -.

DR PIR: B29632; B29632.

DR HSSP: P01034; 1096.

DR Genew: HGNC:2474; CST2.

DR MM: 123856; -.

DR GO: GO:0004869; F:cysteine protease inhibitor activity; TAS.

DR InterPro: IPR000010; Cystatin.

DR Pfam: PF00031; Cystatin, 1.

DR SMART: SM00043; CY 1.

DR PROSITE: PS00287; CYSTATIN, 1.

KW Thiol protease inhibitor; Signal; Multigene family.

FT SIGNAL 1 20

FT CHAIN 21 141

FT ACT SITE 32 32

FT SITE 76 80

FT DISULFID 94 104

FT DISULFID 118 138

SO SEQUENCE 141 AA; 16445 MW; EB54915B1B977A2A2 CRC64;

Query Match 27.3%; Score 74.5; DB 1; Length 141;

Best Local Similarity 32.0%; Pred. No. 0.0078;

Matches 16; Conservative 11; Mismatches 20; Indels 3; Gaps 2;

Qy 1 NVEWQWTTCK--PETTCVPOER-ELHKVNGFVSFAVWFEQYKILN 47

Db 86 DVEIGRTCTKSGPNLDTCAFHQPELOKQKQLCSFEIYEVWEDRMSLVN 135

RESULT 14

AC CYTT RABBIT STANDARD; PRT; 148 AA.

AC 097862;

DT 16-OCT-2001 (Rel. 40, Created)

DT 16-OCT-2001 (Rel. 40, Last sequence update)

DT 28-FEB-2003 (Rel. 41, Last annotation update)

DE Cystatin C precursor.

GN CST3.

OS Oryctolagus cuniculus (Rabbit).

OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

OC Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.

OX NCBI_TaxID=9986;

RN [1]

RP SEQUENCE FROM N.A.

RP STRAIN=Japanese white; TISSUE=Bone;

```

RX MEDLINE=98424349; PubMed=9753427;
RA Kobuchi M., Ikeda Y., Nara H., Kato M., Kamegawa M., Nojima H.,
RA Kawachi H.;
RT "Large scale isolation of osteoclast-specific genes by an improved
method involving the preparation of a subcloned cDNA library.";
RL Genes Cells 3:459-475(1998).
CC -1- FUNCTION: This is a thiol proteinase inhibitor.
CC -1- SIMILARITY: Belongs to the cystatin family.
CC -----
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CC -----
DR EMBL; AB009342; BAB75921.1; -.
DR HSSP; P01034; 1G96.
DR InterPro; IPR000010; Cystatin.
DR Pfam; PF00031; cystatin; 1.
DR SMART; SM00043; CY; 1.
DR PROSITE; PS00287; CYSTATIN; FALSE_NEG.
KM Thiol protease inhibitor; Signal.
FT SIGNAL 1 28
FT CHAIN 29 148
FT ACT SITE 39 39 REACTIVE SITE.
FT SITE 83 87 SECONDARY AREA OF CONTACT.
FT DISULFID 101 111 BY SIMILARITY.
FT DISULFID 125 145 BY SIMILARITY.
SQ SEQUENCE 148 AA; 16346 MW; 1523C8311695B9A CRC64;

Query Match 27.3%; Score 74.5; DB 1; Length 148;
Best Local Similarity 32.6%; Pred. No. 0.0082;
Matches 14; Conservative 11; Mismatches 15; Indels 3; Gaps 2;

QY 7 TTCQKPEPT--TNC-VPOERELHKVNCFFSVFAVPMFEQYKIL 46
Db 99 TTCTKTQTNLANCFHPDQPLQRMKLCSEFYISVPMINKISL 141

RESULT 15
CYTC_MOUSE STANDARD; PRT; 140 AA.
AC P1460;
DT 01-MAY-1991 (Rel. 18, Created)
DT 01-FEB-1996 (Rel. 33, Last sequence update)
DT 10-OCT-2003 (Rel. 42, Last annotation update)
DE Cystatin C precursor (Cystatin 3).
GN CST3.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=BALB/c; TISSUE=Brain;
RX MEDLINE=91054522; PubMed=2241983;
RA Solem M., Rawson C., Lindburg K., Barnes D.;
RT "Transforming growth factor beta regulates cystatin C in serum-free
mouse embryo (SFM) cells.";
RL Biochem. Biophys. Res. Commun. 172:945-951(1990).
RN [2]
RP SEQUENCE FROM N.A.
RC STRAIN=129/Sv; TISSUE=Liver;
RX MEDLINE=95137392; PubMed=7835704;
RA Huh C., Nagle J.W., Kozak C.A., Abrahamson M., Karlsson S.;
RT "Structural organization, expression and chromosomal mapping of the
mouse cystatin-C-encoding gene (Cst3).";
RL Gene 152:221-226(1995).
RN [3]
RP SEQUENCE FROM N.A.
RC STRAIN=ILS, and ISS;
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RX MEDLINE=21363810; PubMed=11471062;
RA Ehringer M.A., Thompson J., Conroy O., Xu Y., Yang F., Canniff J.,
RA Beeson M., Gordon L., Bennett B., Johnson T.E., Sikela J.M.;
RT "High-throughput sequence identification of gene coding variants
with alcohol-related OTUs.";
RL Mamm. Genome 12:657-663(2001).
RN [4]
RP SEQUENCE FROM N.A.
RX MEDLINE=22388257; PubMed=12477932;
RA Strauberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Klausner R.D., Collins F.S., Wagner L., Shemen C.M., Schur G.D.,
RA Altschul S.F., Zeeberg B., Burow K.H., Schaefer C.F., Bhat N.K.,
RA Hopkins R.F., Jordan H., Moore T., Max S.T., Wang Y., Heien F.,
RA Diatchenko L., Marusik K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Brownstein M.J., Udell T.B., Tohiyuki S., Carninci P., Mullaly S.J.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullaly S.J.,
RA Bosak S.A., McKernan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.U., Hulyk S.W.,
RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Fahy J., Helton E., Kettman M., Madan A., Rodrigues S., Sanchez A.,
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Blakeley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smalins D.E.,
RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT "Generation and initial analysis of more than 15,000 full-length
human and mouse cDNA sequences.";
Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
CC -1- FUNCTION: As an inhibitor of cysteine proteinases, this protein is
CC thought to serve an important physiological role as a local
CC regulator of this enzyme activity.
CC -1- SIMILARITY: Belongs to the cystatin family.
CC -----
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CC -----
DR EMBL; M59470; AAB63298.1; -.
DR EMBL; U10098; AAB41056.1; -.
DR EMBL; AF483486; AAL90760.1; -.
DR EMBL; AF483487; AAL90761.1; -.
DR EMBL; BC002072; AAB02072.1; -.
DR PIR; A36163; A36163.
DR HSSP; P01034; 1G96.
DR MGD; MGI:102519; Cst3.
DR InterPro; IPR000010; Cystatin.
DR Pfam; PF00031; cystatin; 1.
DR SMART; SM00043; CY; 1.
DR PROSITE; PS00287; CYSTATIN; 1.
KM Thiol protease inhibitor; Signal.
FT SIGNAL 1 20
FT CHAIN 21 140
FT ACT SITE 31 31 REACTIVE SITE.
FT SITE 75 79 SECONDARY AREA OF CONTACT.
FT DISULFID 93 103 BY SIMILARITY.
FT DISULFID 117 137 BY SIMILARITY.
FT DISULFID 16 16 A -> G (IN REF. 1).
FT CONFLICT 84 84 L -> F (IN REF. 1).
SQ SEQUENCE 140 AA; 15531 MW; 3A563406D58D0F5 CRC64;

Query Match 26.9%; Score 73.5; DB 1; Length 140;
Best Local Similarity 38.1%; Pred. No. 0.011;
Matches 16; Conservative 9; Mismatches 14; Indels 3; Gaps 2;

QY 1 NVEMQWTTCKPEPT--TNC-VPOERELHKVNCFFSVFAVPM 39
Db 85 DVEMGRTTCKSQTNLTDCFPHPDQLMRKALCSFOIYSVPM 126
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Search completed: March 23, 2004, 17:11:07
Job time : 5.42259 secs

RN SEQUENCE FROM N.A.
[1]
RP STRAIN=C57BL/6J; TISSUE=Embryonic testis;
RC MEDLINE=C57BL660; PubMed=11217851;
RA Kawai J., Shinaawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
RA Arakawa T., Hara A., Fukunishi Y., Komoto H., Adachi J., Fukuda S.,
RA Atawaka K., Izawa M., Nishik K., Kiyosawa H., Kondo S., Yamataka I.,
RA Saito T., Okazaki Y., Gajobori T., Bono H., Katsukawa T., Saito R.,
RA Kodora K., Matsuda H.A., Ashburner M., Barcellos S., Casavant T.,
RA Fleischmann W., Gaasterland T., Gissi C., King B., Kochwa H.,
RA Knehl P., Lewis S., Matsuo Y., Nakado I., Pesole G., Quackenbush J.,
RA Schiraldi L.M., Staudt F., Suzuki R., Tomita M., Wagner L., Washio T.,
RA Sakai K., Oikido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
RA Blake J., Bonfelli D., Bojunga N., Carinci P., de Bonaldo M.F.,
RA Brownstein M.J., Bolt C., Fletcher C., Fujita M., Gariboldi M.,
RA Guetlichon S., Hill D., Hofmann C., Huie D.A., Kamiya M., Lee N.H.,
RA Lyons P., Marchionni U., Mashima J., Mazzarelli U., Mondacris P.,
RA Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
RA Saeki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storck K.-F.,
RA Suzuki H., Toyooka K., Wang K.H., Weitz C., Whitaker C., Wilting L.,
RA Wynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kontarakis S.,
RA Hayashizaki Y.,
RT "Functional annotation of a full-length mouse cDNA collection."
RL Nature 409:685-690(2001).
DR EMBL; AK020193; BAB32024.1; -
DR HSSP; P01034; 1G96
DR MGD; MGI:1925859; 8030411P2ARik.
DR GO; GO:0004869; F:cysteine protease inhibitor activity; IEA.
DR InterPro; IPRO00010; Cystatin.
DR Pfam; PF00031; cystatin; 1.
DR SMART; SM00043; Cy; 1.
SQ SEQUENCE 130 AA; 14947 MW; DD2P930B64FE584 CRC64;

Cy 1 NVEQWTTTCKPKPTT--NCVPRERELHKOVNCFPSVAVPMPEDEYKTL 46
Db 76 DLNGRTICKHDEHNINCPILQGSREKKVCVFQVDAPRPFSHFTLL 123

RESULT 5

ID	Q8VII3	PRELIMINARY;	PRT;	130 AA.
AC	Q8VII3;			
DT	01-MAR-2002 (TREMBLrel. 20, Created)			
DT	01-MAR-2002 (TREMBLrel. 20, Last sequence update)			
DT	01-JUN-2003 (TREMBLrel. 24, Last annotation update)			
DE	Cystatin SC. 8030411P2ARIK.			
OS	Mus musculus (Mouse).			
OC	Eukaryota; Metacoa; Chordata; Craniata; Vertebrata; Euteleostomi;			
CC	Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.			
NCBI_TaxID=10090;				
RN [1]				
RP SEQUENCE FROM N.A.				
RC STRAIN=C57; TISSUE=Testis;				
RA Li Y., Friel P.J., Griswold M.D.;				
RT "Molecular cloning and characterization of cystatin SC and cystatin				
RT TR-1, new members of the cystatin family.";				
DB EMBL; AF440735; AL30841.1;				
DB MGD; MGI:1925859; 8030411P2ARIK.				
DR GO; GO:0004869; F:cysteine protease inhibitor activity; IEA.				
DR InterPro; IPRO00010; Cystatin.				
DR Pfam; PF00031; Cystatin; 1.				
DR SMART; SM00043; Cy; 1.				
SQ SEQUENCE 130 AA; 15076 MW; DD34930B64FE58F CRC64;				

Query Match 29.7%; Score 81; DB 11; Length 130;
Best Local Similarity 37.5%; Pred. No. 0.0026;
Matches 18; Conservative 8; Mismatches 20; Indels 2; Gaps 1;

Qy 1 NVEQWTTCKPRT--NCVQPERELHKOVNCFPSVFAVPMPEQYKIL 46
 Db 76 DLEMGRITCKKHENINCPILQSGSKVKHCVQVDRKRPFSHTIL 123

RESULT 6
 ID 08V1H8 PRELIMINARY; PRT; 130 AA.

AC 08V1H8;
 DT 01-MAR-2002 (TREMBlrel. 20, Created)
 DT 01-MAR-2002 (TREMBlrel. 20, Last sequence update)
 DT 01-JUN-2003 (TREMBlrel. 24, Last annotation update)
 DE Cystatin SC.
 OS Rattus norvegicus (Rat).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
 NCBI_TaxID=10116;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN=Sprague-Dawley; TISSUE=Testis;
 RA Li Y., Friel P.J., Griswold M.D.;
 RT "Molecular cloning and characterization of cystatin SC and cystatin
 TE-1, new members of the cystatin family."
 RL Submitted (OCT-2001) to the EMBL/GenBank/DBJ databases.
 DR EMBL: AF42205; AL35350.1; -
 DR GO: GO:0004869; F:cysteine protease inhibitor activity; IEA.
 DR InterPro: IPR000010; Cystatin.
 DR Pfam: PF00031; Cystatin; 1.
 DR SMART: SM00043; CY; 1.
 SQ SEQUENCE 130 AA; 14981 MW; 7A752359860989C9 CRC64;

Query Match 28.6%; Score 78; DB 11; Length 130;
 Best Local Similarity 35.4%; Pred. No. 0.0067;
 Matches 17; Conservative 9; Mismatches 20; Indels 2; Gaps 1;
 Qy 1 NVEQWTTCKPRT--NCVQPERELHKOVNCFPSVFAVPMPEQYKIL 46
 Db 76 DLEMGRITCKKHENINCPILQSGSKVKHCVQVDRKRPFSHTIL 123

RESULT 7
 ID 080Y72 PRELIMINARY; PRT; 140 AA.
 AC 080Y72;
 DT 01-JUN-2003 (TREMBlrel. 24, Created)
 DT 01-JUN-2003 (TREMBlrel. 24, Last sequence update)
 DT 01-OCT-2003 (TREMBlrel. 25, Last annotation update)
 DE Cystatin-like 1.
 OS Mus musculus (Mouse).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
 NCBI_TaxID=10090;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Testicle;
 RC MEDLINE=2238825; PubMed=12477932;
 RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
 RA Klausner R.D., Collins J.S., Wagner L., Shenmen C.M., Schuler G.D.,
 RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
 RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
 RA Diatchenko L., Marishe K., Farmer A.H., Rubin G.M., Hong L.,
 RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
 RA Brownstein M.J., Udell T.B., Toshiyuki S., Carrincci P., Prange C.,
 RA Bask S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullany S.J.,
 RA Bosak S.A., McKernan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
 RA Richards S., Wozley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
 RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
 RA Fehey J., Helton E., Kettman M., Madan A., Rodriguez S., Sanchez A.,
 RA Whitting M., Madan A., Young A.C., Shevchenko Y., Boulford G.G.,
 RA Blakeley R.W., Touchman J.W., Green E.D., Dickson M.C.,
 RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,
 RA Krzywinski M.I., Skalek U., Smalick D.E., Scherch A., Schein J.E.,

RA Jones S.J., Marra M.A.;
 RT "Generation and initial analysis of more than 15,000 full-length human
 RT and mouse cDNA sequences."
 RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
 RN [2]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Testicle;
 RA Strausberg R.;

RL Submitted (MAR-2003) to the EMBL/GenBank/DBJ databases.
 DR EMBL: BC048646; AA048646.1; -
 DR GO: GO:0004869; F:cysteine protease inhibitor activity; IEA.
 DR InterPro: IPR000010; Cystatin.
 DR InterPro: IPR003243; Cystatin_C/M.
 DR Pfam: PF00031; Cystatin; 1.
 DR ProDom: PD001231; Cystatin_C/M; 1.
 DR SMART: SM00043; CY; 1.
 SQ SEQUENCE 140 AA; 16199 MW; 32633E99C4697DA0 CRC64;

Query Match 28.2%; Score 77; DB 11; Length 140;
 Best Local Similarity 33.3%; Pred. No. 0.01; Mismatches 19; Indels 2; Gaps 1;
 Matches 16; Conservative 11; Mismatches 19; Indels 2; Gaps 1;

Qy 2 VEMQWTTCKPRT--TNCVQPERELHKOVNCFPSVFAVPMPEQYKIL 47
 Db 87 VKIGRTCKKNETKXKSCPQSSKXKSLCKSLIVSVPMMYTYQLWN 134

RESULT 8

ID 09EPX9 PRELIMINARY; PRT; 140 AA.
 AC 09EPX9;
 DT 01-MAR-2001 (TREMBlrel. 16, Created)
 DT 01-MAR-2001 (TREMBlrel. 16, Last sequence update)
 DT 01-JUN-2003 (TREMBlrel. 24, Last annotation update)
 DE Cystatin C.
 OS Mus musculus (Mouse).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
 NCBI_TaxID=10090;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN=BALB/c;
 RC MEDLINE=21010502; PubMed=11144350;
 RA Taupin P.J., Ray J., Fischer W.H., Suhr S.T., Hakansson K., Grubb A.,
 RA Gage F.H.;
 RT "FGF-2-Responsive neural stem cell proliferation requires CCG, a novel
 RT autocrine/paracrine cofactor."
 RL Neuron 28:385-397(2000).
 DR EMBL: AF311741; AA040283.1; -
 DR HSP; P01034; 1096.
 DR GO: GO:0004869; F:cysteine protease inhibitor activity; IEA.
 DR InterPro: IPR000010; Cystatin.
 DR Pfam: PF00031; Cystatin; 1.
 DR SMART: SM00043; CY; 1.
 DR PROSITE: PS00287; CYSTATIN; 1.

FT CHAIN 21 140 CYSTATIN C.
 FT VARIANT 16 16 A -> G.
 FT VARIANT 84 84 L -> F.
 SQ SEQUENCE 140 AA; 15517 MW; 3A563406D58D785 CRC64;
 Query Match 28.0%; Score 76.5; DB 11; Length 140;
 Best Local Similarity 34.0%; Pred. No. 0.012; Mismatches 19; Indels 3; Gaps 2;
 Matches 17; Conservative 11; Mismatches 19; Indels 3; Gaps 2;

Qy 1 NVEQWTTCKPRT--TNCVQPERELHKOVNCFPSVFAVPMPEQYKIL 47
 Db 85 DVEMGRITCKKSGTNTIDCFHQPHLMRKALCSFQIVSVPMKGTSLTN 134

RESULT 9
 ID 09DAP1 PRELIMINARY; PRT; 141 AA.
 AC 09DAP1;

DT 01-JUN-2001 (TReMBLrel. 17, Created)
 DT 01-JUN-2001 (TReMBLrel. 17, Last sequence update)
 DT 01-JUN-2001 (TReMBLrel. 24, Last annotation update)
 DE 1700006C19RIK protein.
 GN 1700006C19RIK.
 OS Mus musculus (Mouse).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
 NCBI_TaxID=10090;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN=C57BL/6J; TISSUE=Testis;
 RX MEDLINE=21085660; Pubmed=11217851;
 RA Kawai J., Shingawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
 RA Arakawa T., Hara A., Fukunishi Y., Kono H., Adachi T., Fukuda S.,
 RA Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
 RA Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,
 RA Kadoya K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
 RA Pleischmann W., Gaasterland T., Gissi C., King B., Kochiwa H.,
 RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
 RA Schriml L.M., Staudli F., Suzuki R., Tomita M., Wagner L., Mashio T.,
 RA Sakai K., Okido T., Furuno M., Kono H., Baldarelli R., Barab G.,
 RA Blake J., Botfield D., Boujarda N., Carmignani P., de Bonaldo M.F.,
 RA Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
 RA Grotzinger S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
 RA Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombarts P.,
 RA Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
 RA Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
 RA Suzuki H., Togo-Oka K., Wang K.H., Weitz C., Whitaker C., Wilming L.,
 RA Wyshaw-Boris A., Yoshida K., Hasegawa Y., Kawai H., Kohetsuki S.,
 RA Hayashizaki Y.,
 RT "Functional annotation of a full-length mouse cDNA collection."
 RL Nature 409:685-690(2001).
 DR EMBL: AK005665: BAB24175.1; -
 DR HSSP: P01038; ICBM.
 DR WMD: MG11916544; 1700006C19RIK.
 DR GO: GO:0004869; F:cysteine protease inhibitor activity; IEA.
 DR InterPro: IPR000010; Cystatin.
 DR Pfam: PF00031; cystatin; 1.
 DR SMART: SM00043; CY; 1.
 SQ SEQUENCE 141 AA; 1681 MW; C20FA0DB1AC378C CRC64;
 Query Match 24.7%; Score 67.5; DB 11; Length 141;
 Best Local Similarity 34.0%; Pred. No. 0.21;
 Matches 17; Conservative 10; Mismatches 20; Indels 3; Gaps 2;
 QY 2 VEMQWTTCCQK--PETTNCV--PQERELHKQVNCFFSVFAVWPFEQYKILNK 48
 DB 87 VNIAFTCKKAGNENCLFQDDPKMKWVFCIFIVSSKWKPELKLK 136
 RESULT 10
 Q80ZNS PRELIMINARY; PRT; 141 AA.
 AC Q80ZNS;
 DT 01-JUN-2003 (TReMBLrel. 24, Created)
 DT 01-JUN-2003 (TReMBLrel. 24, Last sequence update)
 DT 01-OCT-2003 (TReMBLrel. 25, Last annotation update)
 DE RIKEN cDNA 1700006C19 gene.
 OS Mus musculus (Mouse).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
 NCBI_TaxID=10090;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Testicle;
 RA Strassberg R.;
 RL Submitted (MAR-2003) to the EMBL/GenBank/DBJ databases.
 DR EMBL: BC048681; AAH48681.1; -
 DR GO: GO:0004869; F:cysteine protease inhibitor activity; IEA.
 DR InterPro: IPR000010; Cystatin.
 DR InterPro: IPR003243; Cystatin_C/M.
 DR Pfam: PF00031; cystatin; 1.

DR ProDom; PD001231; Cystatin_C/M; 1.
 DR SMART: SM00043; CY; 1.
 SQ SEQUENCE 141 AA; 16825 MW; C20FA0DBA884951F CRC64;
 Query Match 24.7%; Score 67.5; DB 11; Length 141;
 Best Local Similarity 34.0%; Pred. No. 0.21;
 Matches 17; Conservative 10; Mismatches 20; Indels 3; Gaps 2;
 QY 2 VEMQWTTCCQK--PETTNCV--PQERELHKQVNCFFSVFAVWPFEQYKILNK 48
 DB 87 VNIAFTCKKAGNENCLFQDDPKMKWVFCIFIVSSKWKPELKLK 136
 RESULT 11
 Q724J8 PRELIMINARY; PRT; 167 AA.
 AC Q724J8;
 DT 01-OCT-2003 (TReMBLrel. 25, Created)
 DT 01-OCT-2003 (TReMBLrel. 25, Last sequence update)
 DT 01-OCT-2003 (TReMBLrel. 25, Last annotation update)
 DE Cystatin F (leukocystatin).
 OS Homo sapiens (Human).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.
 NCBI_TaxID=9606;
 RN [1]
 RP SEQUENCE FROM N.A.
 RA Kolnne N., Chen X., Rolfs A., Halleck A., Hines L., Eisenstein S.,
 RA Koundinya M., Raphael J., Moreira D., Kelley T., LaBaer J., Lan Y.,
 RA Phelan M., Farnier A.;
 RL Submitted (AUG-2003) to the EMBL/GenBank/DBJ databases.
 DR EMBL: BT009825; AAP88827.1; -
 SQ SEQUENCE 167 AA; 18857 MW; E339025A5BD60177 CRC64;
 Query Match 24.5%; Score 67; DB 4; Length 167;
 Best Local Similarity 31.2%; Pred. No. 0.29;
 Matches 15; Conservative 12; Mismatches 17; Indels 4; Gaps 2;
 QY 2 VEMQWTTCCQKPE--TTNCVPQERELHKQ--VNCFFSVFAVWPFEQYKILNK 45
 DB 114 VEIGRTTCKNGHRLRDDCDPQNNHILKQTLSCSEVWVVPWLOHPEV 161

RESULT 12
 Q8VII2 PRELIMINARY; PRT; 128 AA.
 AC Q8VII2;
 DT 01-MAR-2002 (TReMBLrel. 20, Created)
 DT 01-MAR-2002 (TReMBLrel. 20, Last sequence update)
 DT 01-JUN-2003 (TReMBLrel. 24, Last annotation update)
 DE Cystatin TB-1.
 OS Rattus norvegicus (Rat).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
 NCBI_TaxID=10116;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN=Sprague-Dawley; TISSUE=Testis;
 RA Li Y., Friel P.J., Griswold M.D.;
 RT "Molecular cloning and characterization of cystatin SC and cystatin
 TB-1, new members of the cystatin family."
 RL Submitted (OCT-2001) to the EMBL/GenBank/DBJ databases.
 DR EMBL: AF440736; AAL30842.1; -
 DR GO: GO:0004869; F:cysteine protease inhibitor activity; IEA.
 DR InterPro: IPR000010; Cystatin.
 DR Pfam: PF00031; cystatin; 1.
 DR SMART: SM00043; CY; 1.
 SQ SEQUENCE 128 AA; 15152 MW; BCL58982F58DA535 CRC64;
 Query Match 23.8%; Score 65; DB 11; Length 128;
 Best Local Similarity 34.7%; Pred. No. 0.42;
 Matches 17; Conservative 7; Mismatches 23; Indels 2; Gaps 1;


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Oy      1 NMEMQWLTQQCK--PETTCVCPERELHKNVCNCFVFPAWPMPEQYKILN 47
          : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db      74 DLHGRTICGKTDEBDIDNCPLDGEFGKKVRCCTIVYETRVWYTEFTIIN 122

RESULT 13
O9JMB4    PRELIMINARY; PRT; 148 AA.
AC O9JMB4
Dt 01-OCT-2000 (TREMBlrel. 15, Created)
Dt 01-OCT-2000 (TREMBlrel. 15, Last sequence update)
Dt 01-JUN-2003 (TREMBlrel. 24, Last annotation update)
De Dd72 protein (Similar to cystatin 10) (Chondrocytes).
DN Cst10 OR Dd72.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxId=10090;
RN [1]
RP SEQUENCE FROM N.A.
RA Ikegawa S., Nakamura Y.;
RT "Dd72, a novel mouse gene implicated in the early stage of ectopic ossification.";
RL Submitted (JAN-2000) to the EMBL/Genbank/DBJ databases.
[2]
RP SEQUENCE FROM N.A.
RC STRAIN=FVB/N; TISSUE=salivary gland;
Rl Strausberg R.;
Rl Submitted (MAR-2003) to the EMBL/Genbank/DBJ databases.
DR EMBL; AB036743; BAA95411.1; -.
DR EMBL; BC048364; AAB48364.1; -.
DR HSSP; P01034; I696.
DR GSD; MG1:1930004; Cst10.
DR GO; GO:0004869; F:cysteine protease inhibitor activity; IEA.
DR InterPro; IPR000010; Cystatin.
DR InterPro; IPR001713; SteffinA.
DR Pfam; PF00031; Cystatin; 1.
DR PRINTS; PR00295; STEFINA.
DR SMART; SM00043; CY; 1.
DR PROSITE; PS00287; CYSTATIN; 1.
SQ SEQUENCE 148 AA; 16451 MW; 637534CBFCSA179 CRC64;

Query Match 23.6%; Score 64.5; DB 11; Length 148;
Best Local Similarity 30.6%; Pred. No. 0.56;
Matches 15; Conservative 10; Mismatches 21; Indels 3; Gaps 2.

Oy      2 VEMQWTQQCKPET--TNCVCPQR-BLHKOVNCFVFPAWPMPEQYKILN 47
          : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db      94 IELGRITCTKTBESNLVDPCPFNEQPDPQXKVICNFQINVAFMLNKMSMTN 142

RESULT 14
O7SXK6    PRELIMINARY; PRT; 314 AA.
AC O7SXK6
Dt 01-OCT-2003 (TREMBlrel. 25, Created)
Dt 01-OCT-2003 (TREMBlrel. 25, Last sequence update)
Dt 01-OCT-2003 (TREMBlrel. 25, Last annotation update)
De Hypothetical protein.
OS Brachydanio rerio (Zebrafish) (Danio rerio).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniformes;
OC Cyprinidae; Danio.
OX NCBI_TaxId=7955;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=AB; TISSUE=Body;
MEDLINE=22388257; PubMed=12477932;
RA Strausberg R.L., Feingold B.A., Grouse L.H., Derge J.G.,
RA Klausner R.D., Collins F.S., Wagner L., Shemen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Scheffer C.F., Bat N.K.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Haleh F.,
RA Diatchenko L., Marutina K., Farmer A.A., Rubin G.M., Hong L.,
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RA Stagleston M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Brownstein M.J., Ueda T.B., Toshlykhi S., Carninci P., Prange C.,
RA Raha S.S., Loggellano N.A., Peters G.J., Abramson R.D., Mullany S.J.,
RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulik S.W.,
RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Fahey J., Helton E., Kettman M., Madan A., Rodriguez S., Sanchez A.,
RA Whiting M., Madan A., Young A.C., Shewchenko Y., Bouffard G.G.,
RA Blakesley R.C., Triltschman J.W., Green E.D., Dickson W.C.,
RA Rodriguez A.W., Gilmwood J., Schmutz J., Myers R.M., Butterfield Y.S.,
RA Krzywinski M.I., Skelton U., Smallie D.E., Schermer A., Schein J.E.,
RA Jones S.J., Marra M.A.;
RT "Generation and initial analysis of more than 15,000 full-length human
RT and mouse cDNA sequences.";
RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN [2]
RP SEQUENCE FROM N.A.
RC STRAIN=AB; TISSUE=Body;
RA Straubeberg R.;
RL Submitted (AUG-2003) to the EMBL/GenBank/DDBJ databases.
RW EMBL; BC055558; AAH55558.1; -.
KW Hypothetical protein.
SQ SEQUENCE 314 AA; 36803 MW; 26EFBE90C6FC448 CRC64;

Query Match 23.3%; Score 63.5; DB 13; Length 314;
Best Local Similarity 44.1%; Pred. No.1.7;
Matches 15; Conservative 5; Mismatches 13; Indels 1; Gaps 1;

Cy 8 TCCKPFTTCVCPQERELHKYQNCFFSPAVWPF 41
||| ||| ||| | : : : |||
Db 225 TCTLPETAPVPQDIDSKENNIIFT-YSVNMQE 257

RESULT 15
GDANB PRELIMINARY; PRT; 128 AA.
AC QPDANB.
AD 01-JUN-2001 (TREMBlrel. 17, Created)
DT 01-JUN-2001 (TREMBlrel. 17, Last sequence update)
DE 01-JUN-2003 (TREMBlrel. 24, Last annotation update)
DE 1700006F03RIK protein (Cytectin TE-1).
GN 1700006F03RIK
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Musinae; Mus.
OX NCBI_Taxid=10090;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=C57BL/6J; TISSUE=Testis;
RX MEDLINE=21085660; PubMed=11217851;
RX Kawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
RX Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,
RX Atawa K., Itawa M., Nishi K., Kiyosawa H., Kondo S., Yamada I.,
RX Salto T., Okazaki Y., Gojobori T., Bono H., Kanokawa T., Salto R.,
RX Kadota K., Matsuda H.A., Ashburner M., Batilov S., Casavant T.,
RX Fleischmann W., Gaasterland T., Gisli C., King B., Kochwa H.,
RX Kuehl P., Lewis S., Matsuo Y., Nakado I., Pesole G., Quackenbush J.,
RX Schmitt L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,
RX Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barab G.,
RX Blake J., Botfelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
RX Brownstein M.J., But C., Fletcher C., Fujita M., Gariboldi M.,
RX Guetlinich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
RX Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,
RX Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
RX Saeki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
RX Suzuki H., Toyooka K., Wang K.H., Weitz C., Whitaker C., Wilming L.,
RX Wyshnaw-Boris A., Yoshida K., Haegawa Y., Kawaji H., Kontuski S.,
RA Hayashizaki Y.;
RT "Functional annotation of a full-length mouse cDNA collection.";
RL Nature 409:685-690(2001).
RN [2]
RP SEQUENCE FROM N.A.
RC STRAIN=C57; TISSUE=Testis;
```

RA Li Y., Friel P.J., Griswold M.D.;
RT "Molecular cloning and characterization of cystatin SC and cystatin
TE-1, new members of the cystatin family."
RL Submitted (OCT-2001) to the EMBL/GenBank/DBJ databases.
DR EMBL; AK005670; BAB24179.1; -
DR EMBL; AF440737; AAL30843.1; -
DR MGD; MG1:1916612; 1700006F03R1k.
DR GO; GO:0004869; F:cysteine protease inhibitor activity; IEA.
DR InterPro; IPR000010; Cystatin.
DR Pfam; PF00031; cystatin; 1.
DR SMART; SM00043; Cy; 1
SQ SEQUENCE 128 AA; 15036 MW; 40AFD00103E55ED6 CRC64;

Query Match 23.1%; Score 63; DB 11; Length 128;
Best Local Similarity 32.7%; Pred. No. 0.79;
Matches 16; Conservative 8; Mismatches 23; Indels 2; Gaps 1;

QY 1 NVEWQTTQCK--PETTNCVPEQERELHKQVNCFFSVFAVPMFEQYKILN 47
DB 74 DLEWGRITCGKYDEIDINCPLQEGPGERKVCYIVETEAWVTKFTILN 122

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